# PROCEEDINGS OF THE SEVENTH INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS



STRESA

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HELD AT
VILLA DELLE AZALEE
STRESA, ITALY
21–27 AUGUST 1949

GEOFFREY CUMBERLEGE
OXFORD UNIVERSITY PRESS
LONDON NEW YORK TORONTO
1950

*Oxford University Press, Amen House, London E.C. 4*
GLASGOW NEW YORK TORONTO MELBOURNE WELLINGTON
BOMBAY CALCUTTA MADRAS CAPE TOWN
*Geoffrey Cumberlege, Publisher to the University*

PRINTED IN GREAT BRITAIN

# PREFACE

THE Editor has given me the opportunity once again to preface this volume of the *Proceedings* with a word of thanks to all who helped to make a success of the Seventh International Conference of Agricultural Economists which was held at Stresa, Italy, from August 21–7, 1949.

The Conference thanks the Italian Government for its support and H.E. Signor Segni, Minister of Agriculture, who personally conveyed the greetings of his Government. The Conference was also indebted to Signor Ernesto Pavlovich, Prefetto di Novarro, who in addition to placing many of the services of the Province at our disposal also attended our opening and closing sessions; and to the Mayor of Stresa for the great personal interest he took in our welfare and for making us his guests at a reception given by the city.

In organizing a conference such as ours a very great burden is bound to fall on those of our members who reside in the country where we are meeting. Not only do they have to attend to the innumerable details of securing a meeting-place, of finding a suitable hall, of installing interpreting equipment, and so forth, and of solving the complicated domestic problems of housing and feeding some hundreds of people from all parts of the world, but they have also the task of upholding the standard set in preceding conferences. In always refusing to meet in a big city or to court expensive official receptions, and in choosing rural or university surroundings, the Conference has tried to aim at a combination of simplicity with an easy yet efficient informality. The Conference has set a precedent in this respect which is not easy to interpret and which creates a special problem for those who, as in this case, were our hosts for the first time. For this task of interpretation, and for setting up the Italian organization for the Conference at Stresa, we owe our deepest thanks to Senator G. Medici, whose opening address on the first main subject of our programme started off our discussion on the right note of complete frankness and yet of friendly informality.

In November 1948, an Italian Organizing Committee was formed with Professor Brizi as Chairman. The Committee consisted of Dr. Facca, Turin; Dr. Orlando, Rome; Professor Pagani, Milan; Professor Tofani, Florence; Dr. Vanzetti, Verona; and Dr. Visocchi, Florence. It was responsible for the general plan, for the laying out

of the available funds to make it possible for agricultural economists —who are not rich—to enjoy the hospitality of Stresa and to take part in the Italian tours at a reasonable cost.

For the infinite detail of arrangements which must be left to be carried out in the three or four days before and during the week of the Conference, the infinite pains taken to equip the Villa delle Azalee, for the fitting of several hundred human pieces into a jig-saw puzzle of hotel accommodation, for arranging for the excursions and the marshalling of members to these events, together with innumerable other duties involved in trying to meet all the individual needs of two hundred people from twenty-four national groups, the Conference owes a special debt of gratitude to Dr. Facca, Dr. Orlando, and Dr. Virone. In their service to the Conference they were tireless and continuously resourceful.

The Conference made very heavy demands on its staff of assistants, whose services were lent to us from Rome, Novarro, Paris, Oxford, Dartington, and elsewhere. The secretarial staff answered inquiries and typed notices, belated papers, and the recorded speeches of a full week's discussion; the interpreters, who literally sweated in their boxes to provide us with simultaneous translations, and the engineers who tended continuously the electrical equipment for translating and recording. These services, exacting and knowing no prescribed hours, were given with great willingness and good humour.

During the week the members of the Conference took part in three excursions: a steamer trip on Lake Maggiore, which included tea on the Isola Bella and an escorted tour of the Palazzio Borromeo as the guests of Prince Borromeo, who greeted the party; a trip to the Albergo Panorama and the Mottarone, which had unfortunately to be curtailed because of mist; and a visit to the famous horse-breeding farm of Tescio-Incisa, as the guest of its owners, Signors Tescio and Incisa. It is a great pleasure to recall these interesting and enjoyable excursions by putting on record our appreciation to Prince Borromeo, Signors Tescio and Incisa, and to the staffs of the steam-boat and mountain-railway companies.

A feature of our Conferences which has become quite indispensable to those who like to get a first-hand contact with farming life and technique in unfamiliar lands is the tour which precedes and follows the week of meetings. The first of these in point of time left London by bus on the morning of Tuesday, August 16, and proceeded by Dover and Dunkirk to Belgium, France, and Switzerland, to arrive at Stresa on Sunday, the 21st. Following the Conference the return

journey was made, after various visits in Italy via Venice and Genoa, by the Riviera, and so to Paris and London. In parts adventurous, tiring because of the number of visits which had to be crowded into so short a time, the tour will remain a treasured memory for the eighty persons who took part. The second tour enjoyed well-arranged and not-too-hurried visits to peasant farms, packing-stations, factories, and nursery gardens, but managed to fit in some sightseeing among the ancient architectural and artistic treasures of Lucca, Florence, Sienna, and Rome. The long list of thanks due for the arrangements and hospitality on both tours is a formidable one, and would take up too much space here. But mention must be made of those who bore the responsibility within each of the countries through which the tour passed—G. Baptist and A. Verkinderen in Belgium; R. Moreau in France; A. Huni in Switzerland; C. Vanzetti, E. Virone, and G. Orlando in Italy. The whole of this formidable undertaking was organized by the Secretary, Mr. John R. Currie. Those who took part in the trip had a full realization of the heavy demands he made on himself for this one item of the Conference arrangements alone in the midst of his many other Conference duties, and will long remember his 'All aboard'.

Behind the work of our Italian hosts in making the local arrangements lies, of course, the burden of general organization and financial provision which falls also to the Secretary and his staff at Dartington. The recording and editing of the *Proceedings* have again been the work of J. P. Maxton and the staff of the Institute of Agrarian Affairs.

The papers and discussion which are presented in this volume are the result of a week's serious deliberation. There were no formal resolutions to record. There was no attempt to arrive at 'agreement' or 'agreed solutions'. There was instead a determined effort to give ear to one another's points of view and to understand—not to disguise and obscure—differences of conditions, differences of meaning, and differences of opinion and of aspirations. In this the Conference was eminently successful in so far as it could eliminate in so short a space of time the barriers to knowledge and understanding accumulated over centuries, and in the war years by the isolation of some nations. To the reader we can pass on the words of the recorded speeches, feeling certain that they will further an international understanding of agrarian affairs, and, but not so easily, the atmosphere of goodwill and frank comradeship in which the earnest discussions took place, and the stimulation of mind and emotion and of friendship which members carried away with them.

At a meeting of the Council, held during the Conference at Stresa, it was decided to hold the Eighth International Conference of Agricultural Economists in 1952 in the U.S.A., at a place to be recommended by the American members of Council.

L. K. ELMHIRST

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## EDITOR'S NOTE

THIS volume[1] is printed from a verbatim record of the speeches delivered at the Seventh International Conference. They were subject to revision by the speakers and by the Editor, but apart from verbal corrections the aim has been to keep as closely as possible to the actual proceedings.

The order in which papers appear in this published record differs from that of the programme. It might thus happen that a speaker is made to refer to a paper which comes later in the volume, but so far as one can see this has not happened to any serious extent.

A photograph, with key, of the members and visitors attending the Conference is placed between p. 346 and the register of attendance on p. 347.

The Editor wishes to thank the Italian, French, and English transcribing staff for their work, which made it possible to have all the speeches ready in typescript on the evening the Conference closed; to Miss P. Hooke and Miss B. Holloway of the Institute of Agrarian Affairs for all the later secretarial work involved; to the speakers who so promptly revised and returned the transcripts from divers parts of the world; and last, but by no means least, to Mr. Ronald Tuck, Reading University, for his work of translation.

[1] This is the seventh volume of the *Proceedings of the International Conference of Agricultural Economists*. Volumes I and II of the *Proceedings*, reporting the First and Second Conferences, held in 1929 and 1930, were published by George Banta Publishing Company, Menasha, Wis., U.S.A., 1930. Volumes III, IV, V, and VI, reporting the Third, Fourth, Fifth, and Sixth Conferences, held in 1934, 1936, 1938, and 1947, were published by the Oxford University Press, 1935, 1937, 1939, and 1948.

Copies of all seven volumes are obtainable from J. R. Currie, Research Dept. (Economics), Dartington Hall, Totnes, Devon, England; and in Canada and the United States of America from F. F. Hill, Cornell University, Ithaca, N.Y.

*Particulars of the International Conference of Agricultural Economists, its constitution, and a list of officers, members, and correspondents in the various countries will be found on pp. 355-68.*

## ADDRESSES OF WELCOME AND REPLY

H. E. CANEVARI

*Under Secretary for Agriculture, Rome*

I HAVE the pleasure of reading to you two telegrams which have arrived this evening. From the Minister of Agriculture, Signor Antonio Segni: 'Impossible to be present at the inaugural meeting of the Conference. I express my best wishes and recognize the substantial contribution which will come from the labours of the congress to agricultural knowledge in Europe. I request the Under Secretary, Signor Canevari to represent me.'

The other telegram is from the Minister for Foreign Affairs, Count Sforza. 'Cordial wishes for fruitful work. Tell the members of the congress that the Italian Government well knows how valuable their researches and their studies can be for peace and for the well-being of Italy and of our common European homeland.'

I offer you my own greeting and I bring you the cordial greetings of the Minister of Agriculture and Forests, the Honourable Segni, and of my colleague the Honourable Colombo. We were exceedingly gratified by your decision to hold the Seventh Conference in Italy, and I am sure that in saying that I express the view of the Government of Italy. The International Conference of Agricultural Economists, born in England in 1929 with the coming together of the most distinguished men in this field from all civilized nations, collaborates on an international plane to find a solution of the economic and social problems of agricultural production and the industries which depend on it. The subjects placed on the agenda for this Conference are of the greatest importance, amongst them The Diagnosis and Pathology of Peasant Agriculture, Agricultural Co-operation and the Modern State, and The Spread of Industry into Rural Areas. Similar problems are also on the programme of the Government and of the country of Italy, on the eve of facing a discussion of land reform which is widely and eagerly awaited, and about which my friend Professor Rossi-Doria will be speaking to you. After your sittings at Stresa, you will be visiting various regions of our country, and I hope that the cordiality with which you will be received everywhere will serve to demonstrate to you the sympathy with which your work is followed and appreciated by us. You will certainly find the people free, democratic, and industrious

and intent on the reconstruction of our country. You will see how agriculture in Italy has been the object of continual, and sometimes radical reforms from the most remote times right up to the present day, reforms which are always related to the improvement of the land and pursued in every locality and in every age with sacrifice, with much labour, and with savings seldom accumulated without pain. Notwithstanding this imposing work, the high density of the population (46 millions of inhabitants with a cultivable area of about 17 million hectares and without an adequate industrial development) has determined the permanent disequilibrium indicated by Senator Medici in his introduction. Thus we have a political and social problem, international in character, to which I would call your particular attention. Italian emigrants have always given in all countries a sure proof of their capacity and of their great industry, and, this being so, the problem, posed by Senator Medici at the end of his paper, ought to be warmly recommended to your careful attention and examination, not only for Italy but also in the interests of those civilized countries in need of a greater agricultural and industrial development. You belong to an organization which is highly practical and highly useful. With these conferences of yours you can establish contact amongst yourselves; you can get to know each other; and you can exchange your impressions and your ideas; and, above all, you can assess the different conditions and environments behind the experience and data and so provide a sound basis for your inquiry and your conclusions. Your work, for which we offer our very best wishes, will be followed by us with greatest attention and with much interest. But gentlemen, since every project of this sort would be doomed to failure without world tranquillity and peace, permit me to conclude with a further wish, that the politicians in their conferences should follow the example of your conference, that they should be able to see and know and understand one another frankly and agree sincerely so as to provide for their peoples that greatest of all benefits, peaceful work in a world finally at peace.

DR. ERNESTO PAVLOVICH, *Prefetto di Novara*

I have the pleasure of passing on to you, Mr. President, to you, your Excellency, representative of our Ministry of Agriculture, and to you, gentlemen, who are delegates from so many nations of the world, the warmest greetings from the authority and from the people of the Province of Novara. This Province, which has the honour of offering you its hospitality, although it has a very notable network

of industrial establishments, is, nevertheless, pre-eminently agricultural, and is concerned with the most varied and highly contrasting systems of cultivation. Indeed, while the low part of Novara is noted for its high rate of production of rice, milk, and grain, the hilly region in the foot-hills of the mountains is found to be rich in the raising of livestock, in vineyards, and in growing grain, fruit, and flowers, while the higher mountain region is richly equipped with pastures and with forest production. From the agricultural point of view this Province should be considered as one of the most perfect and complete, because there are lacking only citrus fruit and market gardening. This Province follows with attention and applies with great care the healthy precepts of modern agricultural economies. It feels, therefore, the great importance of the problems which you have united to discuss. For that reason our greeting is the greeting of a Province of farmers, and is a greeting full of warm sympathy towards you as eminent scholars and technicians of agricultural economics. The Province also wishes to thank you for having chosen it as the seat of this important congress. Your activities will undoubtedly be extremely fruitful and should call the solemn attention of everyone to the grave economic and social problems of the agricultural undertakings of this our land. This, then, is the wish which I express to you and I hope that you will carry away with you the best possible memories of these days and of Stresa, so enchanting and hospitable.

PROFESSOR A. BRIZI, *Chairman of Italian Committee*

I have the pleasure of welcoming you on behalf of the Italian Organizing Committee of this Conference. Like the six preceding Conferences, this one has arisen out of the initiative and the general direction of the International Conference of Agricultural Economists. This means that our first thought of gratitude must go to the President, Mr. Elmhirst, to the Honorary Secretary and Treasurer, Mr. Currie, and to the Publications Secretary, Mr. Maxton. These three came to Italy last year to consult with the Istituto Nazionale di Economia Agraria, and in particular with its President, Senator Professor Medici. An organizing committee was then set up by Professor Medici, consisting of his colleagues, Professors Pagani, Tofani, Facca, and Vanzetti, and has as its indefatigable secretary the Technical Secretary of the Institute, Dr. Orlando. Financial contributions to the project were made by the Ministry of Agriculture and Forests, by the Federazione Italiana dei Consorzi Agrari, by the Consorzio Nazionale della Canapa, for the Ente Nazionale Risi, and by the

Alto Commissariato per l'Alimentazione. In this last week, our activities have been moved to Stresa and have become really noteworthy. The people principally concerned were Mr. John Maxton, who became the friend and the counsellor of all of us, and Dr. Orlando, ably assisted by their colleagues Professor Facca and Dr. Virone, the staffs of the International Conference of Agricultural Economists, of the Istituto Nazionale di Economia Agraria, and of the Sezione Provinciale della Alimentazione di Novara, and here, at Stresa, the Town authorities and Azienda di Soggiorno collaborated generously and at all times courteously. I have the pleasant duty now of offering to all of you the work given by these people who were the true makers of the Conference, and at the same time I wish to thank the Società dei Grandi Alberghi who have courteously placed at our disposal the Villa delle Azalee. If I have forgotten to thank anybody I hope I shall be excused because it has not been my intention to forget anybody.

The work of these men who have prepared your meeting was inspired not only by the old lively and worthy tradition of the International Conference of Agricultural Economists, but also, if I may be permitted to make this interpretation, by the beauty and the joy of making real the collaboration between citizens of different countries and between the countries themselves. We are realistic and we are fully aware of how difficult, indeed bitter, a thing it is to comprehend the tendencies, the interests, and the aspirations of different peoples. But we are also men of faith and we firmly believe in the contact between men of goodwill who are discussing problems which are at the base of the social life to-day and which will be the basis of the evolution of to-morrow. We believe that this contact contains the germ of hope for a better future. It contains for me the assurance that the solutions of the questions between countries can be thought over by minds of more peaceful disposition and can be handled by calmer hands. Mr. President, I wish that when you leave our country you will feel the sweet pain of parting, that you will be able to feel the time we have spent here together has been too short, not only because of the natural charm of the locality which we find at Stresa, not only because of the illustrious examples of agriculture, amongst the most illustrious in the world, which you will visit, agricultural systems which originated in the days of the first liberty of the Italian Communes, days which were the prelude of most beneficial social developments, not only for this, but also for the hospitality which, simple though it may be, we have offered to you with an open heart and in the spirit of brotherhood.

G. MINDERHOUD, *Landbouwhoogeschool, Wageningen, Netherlands*

At our Conference which was held at Dartington Hall in 1947 two Vice-Presidents were elected, namely, Dean Young of Purdue University, U.S.A., and myself as a representative of continental Europe. In this capacity it is my privilege to express our great appreciation of the privilege of being able to hold this Conference on the European continent. When it became clear to our President, Mr. Elmhirst, that free discussions in eastern Europe could not be guaranteed, he proposed to his Vice-Presidents to ask Senator Medici if it would be possible to organize a conference in northern Italy. Both Mr. Young and I agreed at once, and thanks to Mr. Elmhirst's initiative we are now together at Stresa. We have not only to thank Mr. Elmhirst for his initiative, but also for the enormous trouble taken to prepare this Conference. We are very much obliged also to our Italian colleagues and to the Italian Government, who made it possible for us to meet in this wonderful place. Stresa seems to be an ideal place for a conference. We have never held our conferences in large cities; we always tried to find a quiet atmosphere and places where members were less liable to escape to bars and dances far from the official meetings!

The value of our conferences depends not only on the papers which are read and the discussions. It is important also to have the opportunity to keep personal contact with our fellow members, which so often leads to better understanding of economic and political situations in the world. We shall undoubtedly soon feel at home amongst so many old friends, and I thank most sincerely the Italian authorities and our Italian members for their words of welcome and for their hospitality. Our conferences are not complete without the tours before and after the conferences. I know how many difficulties there are in preparing these tours. This time there are extra difficulties because of the international complications of currencies, customs inspections, passports, &c. Having made the first tour through Belgium, France, and Switzerland, I have great pleasure in expressing my appreciation for the way in which we have been helped by Professor Baptist and Ing. Verkinderen in Belgium, and Dr. Huni in Switzerland and to our drivers who overcame all the difficulties.

I am convinced that the success of the first tour is a good omen for the success of this Conference.

A. W. ASHBY, *University of Oxford, England*

I am in the fortunate position that I have spent several days in Stresa, so that I can fully appreciate all the work which has been

done, more particularly in the last week, in preparation for this Conference. Unless one actually saw the work that had to be done and the way people were doing it, one could not possibly appreciate all the energy, all the thought, all the goodwill which has been devoted to the preparation for this meeting. But preparations have been going on for a very long time with the same understanding, ability, and goodwill, and we deeply appreciate the work of the Italian Committee. Those of us who are visiting Italy, and particularly those of us who are visiting Italy for the first time, greatly value the welcome which has been given to us, not only in words, but in work, with the great promise of a very successful meeting.

It is particularly gratifying to an Englishman to come to Italy as a student of agricultural economics because, as far as I am able to ascertain, the course of the development of this applied science in Italy has been more like the line of development in Great Britain than that in any other country. We went through the same stage of change and development from the technical study of agriculture into the study of a general rural economy and then into a strict and closely reasoned study of agricultural economics itself. We have links, therefore, links which have been shown to us in the beautifully produced book on Italy which has been prepared specially for this Conference. But it is particularly important that this Conference should be in Italy at the present time because she has agricultural and rural problems as acute and pressing as any other country, and more pressing than most. There are international reasons also why it is important that this meeting should be in Italy. Our Italian hosts are intensely aware that one of the world's greatest needs at the present time is that of securing ever more widely opening doors. Doubtless we shall hear more of this need during the week. We, as scientists, or as rural philosophers, perhaps may not be able to open political doors, but we can at least keep open doors for ideas and for transmission of comparative experience, and that most probably is the most effective way in which in the end we are able to open political and economic doors. On behalf of the visitors to Italy I offer you—our Italian hosts—our keen appreciation and our hearty thanks for the welcome you have given to us and I hope that we may repay you in fully satisfactory contributions to the discussions during this week.

# ADDRESS TO THE CONFERENCE AT ITS CONCLUDING SESSION

HIS EXCELLENCY SIGNOR ANTONIO SEGNI

*Italian Minister of Agriculture*

MR. President and Members of the Congress, it is a very lively pleasure for me to be able to be present at the closing stages of this Seventh International Conference of Agricultural Economists which Stresa has had the honour of receiving during the past week. Despite my personal inclinations to take part in the discussions, Government duties have not permitted me. I have, however, followed your deliberations with interest and enjoyment. I am quite sure that Italian agricultural circles would want me, first of all, to express my gratitude to the organizers for having chosen our country as the meeting-place of a Conference, which, now in its twentieth year of activity, has already furnished a high contribution to the solution of economic problems in the agricultural field.

The economy of world agriculture, particularly in this post-war period, is passing through a delicate testing-time. The need is greater than ever for the problems inherent in it to be discussed internationally, in order to crystallize fundamental concepts adequate to the peculiar exigencies of the moment. A heavy responsibility therefore falls on agricultural economists. The perspicuous choice of themes for the excellent main papers, namely, The Diagnosis and Pathology of Peasant Agriculture, Agricultural Co-operation and the Modern State, and The Spread of Industry into Rural Areas, has led to an interesting and lively discussion and has made possible an analysis of the various problems into their various component parts. The connexion between the three arguments has permitted a broader examination of the situation—an examination which is especially helpful at a time when such problems are of immediate practical importance in the administration of agricultural reorganization in our own country. The more specialized papers, such as those of Dr. Thibodeaux on the work of the E.C.A., were no less interesting and no less appreciated.

I have given careful attention to the results of this Conference and I shall make it my particular responsibility to recommend them for careful consideration by the Government, in order that the greatest possible benefit be derived from them. I permit myself the hope that

those agricultural economists who have assembled here to apply their science and their ability to the study of so important a sector of the world economy, will retain a grateful remembrance of their stay in Italy, together with a conviction that our country is heading with every means at its command towards the achievement of that much-hoped-for international collaboration which is indispensable for the achievement of a common prosperity.

# PRESIDENT'S ADDRESS

L. K. ELMHIRST

THIS is our Seventh Conference, and the twentieth anniversary of our First. Five were held before the war, between 1929 and 1938, and this is the second since the war. But this Conference has distinction for two reasons. This is the first meeting since the war which has been open to as many members as wished to attend. In 1947, when we held the Sixth Conference at Dartington, it was still necessary, because of problems of space, currency, and travel, to restrict our numbers to 80 and so to limit each country's delegation. Those who attended will, I think, agree that from the point of view of re-establishing old contacts, of making new friendships and of stimulating once again the flow of ideas and of orderly discussion and challenging disagreement—all functions which were so completely disrupted between 1939 and 1945 by war—the 1947 Meeting confirmed to the full the purpose for which we were founded in 1929. Here in Stresa we are happy to be able to regain our old freedoms and to invite all our members to attend without restriction of numbers, persons or countries, and, if I may add, of wives! It is good that so many members from so many countries, and from so far away, have been able to attend to-day. In letters from absent members, whose faces had become familiar at our gatherings in the past, there is an obvious note of sadness in their regret that they have been unable to be with us to-day. It is not only the memory of past conferences that is responsible for this feeling, but the rapidly increasing interest all over the world in the field of our discussion.

This Conference has distinction, too, in that for the first time in our history we are meeting on Italian soil, where statesmanship, poetry, and practical farming have been intimately associated from the time of Vergil and before.

When this Conference first met at Dartington in 1929 the great economic depression had not yet broken with it full force upon us all. When we met again at Dartington in 1947 it was only natural that our discussion was coloured by the catastrophe of a war which had occupied nine of the years since our previous Conference was held in Canada in 1938. To-day we look back over two years instead of nine, and across national and international events which have been almost tranquil when compared with the years that went before. It is difficult to give a graphic picture of them. They have not been years

of major upheaval, and yet there have been warlike excursions which have caused acute suffering locally and grave anxiety to us all, whether in China, in Indonesia, in India, in Palestine, or even in Berlin with its months of warlike siege, if not of actual warfare. On the other side of the picture let us take comfort in the fact that none of these incidents drew the great powers directly into war, as they might well have done in centuries gone by. On the negative and blacker side of the picture we must accept the obvious fact that the United Nations are not yet united in a determination to discover how, through argument, to deal with those conflicts hitherto dealt with only by an appeal to force. This fact must still be a cause for depression, but a stimulus to us at this Conference to show the way. Opposition in human affairs, and the mutual criticism that goes with it, need not in itself be a bad thing. After all, where the politics of a country have been based upon the two-party system there is always an implication that opposition will at times be very real indeed and apparently irreconcilable. Yet in such democracies the system has, in the main, worked. It has been one of the tragedies of human weakness that people have attempted to settle their differences by recourse to the use of force. It is not opposition that we need fear, however irreconcilable it may appear, but the attempt to replace argument by resort to war. I hope we may take comfort from the fact that, although during these two years opposing views have seemed so often so irreconcilable as to forbid further discussion, recourse to war, so far as one can see, has not seriously occupied the minds of real statesmen on either side.

In the economic world there is some light but much shadow still. On the negative side there is, indeed, a feeling of disappointment that economic recovery from war has not proceeded far enough to enable people to enjoy all of the freedoms and opportunities of pre-war times, let alone to advance to the better things which the outbreak of peace was said to promise. Recovery in many countries limps badly, but we are still only four years from the ending of hostilities. In 1922, four years after the First World War ended, we had only just begun to realize how false had been so many of the appearances of recovery between 1919 and 1920, and the worst of the inflation, the devaluations of currency, and the curse of general unemployment had still to come. When we look at the world to-day we realize that for large areas there has been a substantial, almost a remarkable, recovery of internal economy from the distortions which war made necessary. For some of us there is a little more food; some more manufactured goods; even some new houses and a few new schools and hospitals

as each year passes. The increase in the stability of the internal economies of many countries has been substantial.

It is in the adjustment of our internal economies to the world situation that there has been less positive gain. Here we must still view the future with anxiety and hope for economic statesmanship of a very high order. Let me give you an example. The Chairman of Unilever gave the following estimates on August 12. Taking 1938 as our base there remains to-day a world deficit in fats and oils of approximately 2½ million tons. This figure takes no account of increases in population or of gross under-consumption by under-nourished peoples. To-day there exists in the so-called dollar area of the world a surplus of fats and oils of approximately half a million tons for which there is no immediate sale, yet an inability on behalf of the non-dollar area to exchange their products for this surplus. This inability can best be expressed in a rough comparison of purchase price between the two areas: tallow, £45 in the dollar area, £110 in the non-dollar area; soya and cotton-seed oil, £70 in the dollar area, £135 in the non-dollar area; copra, £46·5 in the dollar area, £63·5 in the non-dollar area.

While we were at Dartington in the autumn of 1947, the experts of 16 nations (some of them our own members) met in Paris to draft a plan in reply to the notable offer from the U.S.A. of Marshall Aid in Europe. This week we shall be hearing from this platform about some aspects of the administration of co-operation for European recovery under the Marshall Plan. No one for one moment can doubt the succour which the Plan has brought to Europe at a time when crisis was imminent everywhere and when our degree of dependence upon Marshall Aid for keeping the wheels turning in our respective countries was extreme. That a permanently workable system of international trade is being, or will be, found in the period set is still in the realm of the possible. Our anxiety to-day lies in the failure of the foreign-exchange system to service basic human needs. A place for full discussion of this immediate problem has not been found on our programme, but until some of the major financial and political issues are clarified it would be difficult to sustain here a discussion on this subject that would have lasting value. We shall, however, have some light thrown upon this question in a paper dealing with the foreign trade of one of the dollar-area countries.

Leaving the general background of these recent years, I turn to what is the second function of the President's address at our Conferences, namely, to outline to you the main steps that have been taken in the preparation for this Conference and particularly of the programme.

First, however, there falls to me the task of referring to those of our members whose deaths have been reported to us since our last Conference. It is, I think, remarkable that we have had reported to us only one loss, but it is one which was a great personal grief to many of us. Mr. Dick Henderson, whom all of you who were at Dartington two years ago will remember, and whose contribution printed in our *Proceedings* will, I believe, remain a classic for all time, died this year.

Those of you who were present at the closing session of the Sixth Conference will remember that our Council reported that they had accepted the invitation from Hungary to be the hosts of our Seventh Conference. The invitation was conveyed to us by Dr. Ihrig. He had originally taken enthusiastic charge of the arrangements for the Conference which, had the war not intervened, was to have been held in Hungary in 1941. I am sure many of you will realize what an acute disappointment it must have been to him when he felt bound to write as late as the summer of 1948 telling us that circumstances had changed in Hungary since we had accepted their invitation and that he was no longer in a position to be of help to us. It was with deep regret that we learnt this news, since we realized that by moving our Conference from eastern Europe we would inevitably deprive many old and loyal members of the chance of attending this meeting. After consulting our Vice-Presidents, Doctor E. C. Young and Professor Minderhoud, we asked Professor Medici, who had also brought us an invitation in 1947, to explore the possibility of meeting here in Italy in 1949.

Deep as our regret about Hungary must be, we were quickly inspired by the enthusiasm which Professor Medici gave to our request, and in due course the decision was finally taken to meet here in Italy. An Italian Committee to which Dr. Brizi referred last night, was formed.

Stresa having been chosen, our next major concern was to discover from Council members their wishes in regard to the programme. It has always been a tradition for us to divide the programme roughly into two parts. The first part consists of what we call main subjects, to each of which we devote one day's discussion; the other half consists of individual papers which we call non-discussion papers because, although there may be some 15 minutes' opportunity for questions and comment—if the paper itself is not too long—there is no intention of having any prolonged discussion on the subject. It is generally necessary to leave this part of the programme to be filled at a late date and at the discretion of your officers once they know who can be present.

To the first part of the programme, however, we devote much time and consultation. Christmas 1947 and January 1948 I spent touring a number of the Agricultural Colleges of the east, mid-west and north-west of the U.S.A., and the prairie and east provinces of Canada, preparing the ground for our next Conference. But my first formal step as President in preparing the programme was to use the opportunity of the Summer Meeting of the British Agricultural Economics Society at Oxford in July 1948 to consult with officers of that society and the British members of our own Council, Professor Ashby, Mr. Archie Bridges, and Mr. Maxton on the first outlines of a programme and to obtain their suggestions and comments.

In September 1948 I flew again from England to Green Lake, Wisconsin, U.S.A., where the American Farm Economics Association meetings were being held. I made this trip specially to outline our tentative plans for Italy and particularly to discuss the detailed proposals for the programme, which had begun to take shape in the three main subjects now in the final programme in your hands. There I met with the American members of our Council, with the A.F.E.A. Executive and with a general gathering of our members who were at Green Lake, and later in New York with our Vice-President, Professor E. C. Young, who was unable to be at Green Lake himself.

Back again on this side of the Atlantic I packed Jock Currie and John Maxton into a car in November 1948 and the three of us drove across Europe to this hospitable country to discuss the programme with Professor Medici and his colleagues. On our way to Italy we visited Professor Fromont and Dr. Bergmann in Paris, and during our return journey we called on Dr. Huni and on our old colleague, Dr. Laur, in Switzerland, on Professor von Dietze and Dr. Rolfes in Germany, on our Vice-President, Professor Minderhoud, in Holland, and on Professor Baptist in Belgium. With each of them we discussed plans for the programme and the three main subjects suggested. At the end of this ten-day tour we incorporated a number of comments and suggestions which they put to us. We had hoped to visit the Scandinavian countries in the same way but failed to find the time from our other duties.

In February 1949 I again had a chance to discuss plans with Professor Young in New York, with Professor Hill at Cornell, and I had telephone conversations with Dr. Coke and Dr. Lattimer. I also spent two days in Kingston, Jamaica, with Professor Huggins who attended our Conference in Scotland in 1936.

These consultations were all that could be undertaken in the time at our disposal. As Dr. Warren once said, it takes 18 months to plan

a Conference from the time your place of meeting is settled. Other consultation had therefore to be done by correspondence, and, while you will realize that it is not possible for every Council Member to be consulted in person, it is equally certain that this programme has not been produced like a rabbit out of some presidential hat or from underneath the Cow-bell.

Out of all this consultation there evolved the three main subjects which are in your programmes. I must avoid anticipating the task of the opening speakers, but I would like to ask you to look for a moment at the subjects all together.

It has been suggested to me that these subjects hardly deal with the fundamentals of the present situation, dominated as it is by the immediate need for the economic recovery of Europe and for the suitable allocation of American Aid. No one, I think, would deny the importance of these particular needs and we have allotted two hours of our time on Thursday morning to Dr. Ben Thibodeaux, who is head of the agricultural section of The European Co-operation Administration. But needs can be immediate without always being fundamentals.

Anyone who knows European agriculture will be conscious of how much the peasant ideal, or, as some might say, the family farm, dominates agricultural policy and land reform. It is not always realized by those who do not live on the mainland of continental Europe that so much of European agriculture falls short of this peasant ideal, because holdings are either too small or are too fragmented into scattered strips, or are over-burdened with under-employed labour, or lack essential services. There is much to be done to make the peasant ideal a reality and to give it a sound economic base. Furthermore, the ideal peasant structure undoubtedly suffers from a number of handicaps which would be alleviated by some measure of large-scale operation or by some specialization of the capital or landholding. Must the peasant or family farm give way to these, or is it possible to obtain the benefits of large-scale operation by some other means while leaving the peasant structure essentially intact? That problem is basic not only in all European agriculture, but also in agriculture over most of the world. Similarly it is fundamental not only to the situation which exists now, but was fundamental to pre-war agriculture and will be fundamental even after the effects of war have disappeared, unless there happens an altogether unexpected rural revolution. You will agree that it is appropriate that this subject should be opened by Professor Medici.

Our second subject is Agricultural Co-operation and the Modern State. This is to be opened by Professor Ashby, whose contributions

to our Conferences are too well known and respected to need introduction, and by Professor Visocchi, who holds a unique position in the field of agricultural co-operation in Italy, a position which brings him very intimately into touch with the practical difficulties of this subject. Co-operation is one of the ways in which the small unit of production can, without losing its independence, obtain some of the advantages of larger commercial operation. There are many possible developments in and aspects of co-operation in this post-war world which are being tried or retried. But the problem of co-operation to which we are directing special attention is the relation between agricultural co-operation and the modern State, a State which tends to take to itself more and more economic power every day. Co-operation, it might be said, was born in order to save for the small man a measure of freedom and independence in the face of big business operations. Will co-operation live on to be one of the means of securing the independence of the small man against a powerful State?

Our third main subject is the spread of industry into rural areas—a subject which has perhaps a different significance in a country which has plenty of industry concentrated in towns and cities and in certain areas, and, on the other hand, countries which have no industry worth speaking of but have a dense population trying to make a living on the land in a way that gives little hope either of an efficient agriculture or of the earning of a tolerable standard of living for its people. These two kinds of problem, however, have some things in common. To open this subject we have Professor R. G. Tugwell, who in his younger days studied agricultural conditions in France. Professor Tugwell was for a number of years the Governor of Porto Rico and had personal experience of trying to put into operation a programme of industrialization there.

These are the three main subjects which have found their place in the programme after much consultation. We could, of course, have chosen others, but I would willingly challenge anyone to propose any three subjects which were *more* fundamental than these.

Turning more briefly to the non-discussion papers which are to be read to us. Needless to say, those of us who concentrate upon particular aspects of agricultural economics, or who are bound to follow some specialization, will find here subjects which may not follow that interest closely. Dr. Warren used to insist that it was one of the virtues of our Conferences that we were being asked, and given the opportunity, to let our minds range freely on things which were out of our own groove. That idea is always in our minds in preparing

this part of the programme. Indeed, we at one time called them Miscellaneous Papers in order to denote their wide variety of interest.

We have a similar variety of interest in our programme for this week. Professor Edgar Thomas and Dr. O. C. Stine on prices; Professor Anderson from British Columbia on a subject which is not far removed. These papers occupy Tuesday morning. In the late evening we have, in a more descriptive mood, Professor Bandini from Perugia, who gives us a description of Italian agriculture, especially for the benefit of those of you who are postponing, until you return home, the reading of Professor Medici's attractive booklet which has been put in your hands. Later Dr. Klatt, who until recently was associated with the German Section of the British Foreign Office, discusses the Progress of Agricultural Recovery in Germany.

On Thursday morning we devote, all-told, two hours to Dr. Thibodeaux and the work of the E.C.A., to which I have already referred. Perhaps it is appropriate that our Canadian colleague, Professor Burton, should follow with a paper on the foreign trade of one of the dollar countries. In the evening of Thursday we turn again to a different field when a distinguished authority on the subject, Professor Rossi-Doria, will speak on Land Reform.

You will notice that on Friday the programme indicates that we are only allotting three hours instead of five to the third main subject in order that in the early evening we may have time for two papers, one by Dr. J. Chambart de Lauwe, of the F.A.O. Statistical Office at Geneva, on The Present Condition of European Agricultural Statistics, followed by Mr. Harwood Long, of Leeds, on a quite different type of subject but one which has an intriguing interest for all those engaged in farm-management work: Reducing Costs of Agricultural Production in a High Cost Area. I should make it clear, however, that if it seems desirable that the discussion on The Spread of Industry into Rural Areas should be carried on further, we may suggest moving the other papers into the free time on Saturday evening.

Lastly, on Saturday morning we have two papers on Land Appraisal: one by Professor Bill Murray on Land Valuation and Credit, and the other by Dr. Boerendonk on Farm Appraisal Problems in the Netherlands.

That is our formal programme. One further word I must add at this stage. In the case of the main subjects on Monday, Wednesday, and Friday we have arranged for the persons mentioned in the programme to open the discussion. After that it is free to everyone to catch the Chairman's eye and to contribute to the debate. The fact

that your name does not appear in the programme does not—as every attender at our previous Conferences knows—mean that you are not expected to speak. Far from it! Five hours is quite a long time and it is there to be filled with speeches, all of which will find a place in the printed record.

Outside the programme of the Conference Sessions there is an equally important programme, arranged for us by our Italian friends, of excursions and informal play.

For the next six days we shall have a unique opportunity not only to hear papers and to take part in discussions but to come to know one another, to eat and think and play together. It is through this informal, as much as through the formal, side of the Conference that in the past we have reaped the greatest benefit from our meetings. Those who have co-operated in the organizing of this Conference have done their task in bringing you together here and in providing you with the elements of the Conference. It is now in your hands to make this Conference as great a success as any in the history of our meetings by active and frank discussion. And remember that while the formal programme in this room is important, it is the contacts and friendships of an international character made here during this week which will have the more lasting value in furthering the interests of our subject and in promoting international understanding. Membership at this Conference means membership not as officials, not mainly even in our official capacities, but as fellow students, as fellow human beings challenged by the crying needs of humanity.

# DIAGNOSIS AND PATHOLOGY OF PEASANT FARMING

## OPENING ADDRESS

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MANY difficulties have been present in my mind in thinking out this subject which was so courteously assigned to me by the President. This subject evidently does not lend itself to a vigorous scientific treatment, for it involves not only the diagnosis of a definite particular condition of peasant society, but also the examination of what might be called the remedies. On the other hand, the dimensions of the subject itself are such that it cannot be dealt with at all exhaustively in a brief paper to be read in 40 minutes. I therefore ask your tolerance if, now and again, I have not been sufficiently precise, and if, practically always, I have not been exhaustive. I myself harbour many doubts about certain of the conclusions which I shall expound in an emphatic manner purposely to stimulate discussions, and so that our deliberations shall always be sincere and unprejudiced, and always aimed to obtain and face the immediate and direct knowledge of facts and not at ignoring them.

Peasant farming—that is to say the cultivation of the soil and the raising of livestock by the farm family—is one of the powerful original forms in which economic activity is exercised.

We find it in all countries and in all times, and its evolution has followed closely that of landed property. The connexion between the two is particularly evident in Europe where the growth of the family farm and its decline have often coincided with periods of reform and with revolutions that have deeply modified the distribution of land ownership.

Peasant farming takes two forms, (1) that of operating ownership, and (2) that of the holding cultivated by the farm family which, while not owning the land, enters into relations of tenancy or of partnership with the landlord. He in his turn may either dissociate himself from the business of production, as in the case where he leases the farm to a tenant, or may participate in its operations, discharging the functions of manager as in the case of the *metayer* agreement.

The practical forms in which peasant farming is exercised differ

considerably from country to country, not only with the physical environment, but also with the varying social and economic conditions. The great diversity of these conditions is partly due to the changes that have occurred in the economic content of property rights, which varies from one territory to another, changing in the course of time. The rights of the landlord himself vary considerably in practice from one part of the country to the other, and consequently the types of rural economy based on those rights acquire different characteristics. The historical events that have shaped the present structure of peasant holdings in the several parts of the world help to explain the intrinsic differences of a form of farming which to the superficial observer presents uniform features.

The core of uniformity met with in all types of peasant farming is the expression of ever-present causes inherent in the intimate relations existing between the man and the soil he tills. The rural economy of peasant farming is the direct result of the ties existing between the farm family and the natural environment in which they live. The substantial uniformity of *peasant psychology* is due to the fact that all are alike governed by the cycle of production and are dependent on seasonal changes and on the life of plants and animals. The similarity is also due to the fact that in all countries the *primary objective* of the farm family is to build up a farm that will provide for their essential needs. In the course of time this primitive farm created by men intent on procuring for themselves food and raiment, gave rise to a more advanced form of agriculture, and market economy arose.

The growing importance of market economy has revolutionized peasant farming which is by its very nature autarchic. The market offers the opportunity of exchanges, and suggests the division of labour. This soon makes its effects felt in the economy of the farm family, which becomes increasingly sensitive to outside influences, as exercised above all by the industrial and commercial world.

The peasant, instead of exhausting himself in raising bread cereals for his family, tries to specialize to meet also market demand. He thus intensifies his production, makes savings, and invests them in the land.

Diversified farming improves the living standards of the peasants; their diet becomes more rational (the number of calories increases and the food is less monotonous) and with the introduction of animals and machinery their work becomes less hard.

In uncongested areas where the land belongs to those who till it, we generally find systems of peasant farming that satisfy all economic and social requirements. The traditional west German *Bauer*, the

operating landowner in Denmark, Flanders, and Finland, the family farmer of the United States and Canada, are among the most complete and satisfactory types round whom there grows up a farm which, while conserving the valuable traditions of the past, has known how to profit by the contributions made by modern technology.

But only a limited portion of the rural population of the world is engaged in this ideal type of family farming, which has been built up by the operating landowners of viable farms found on relatively restricted areas. It is still the distant ideal on which are centred the hopes of millions of peasants who till the soil in Asia, south and east Europe, some parts of the American continents, and Africa.

Private ownership of the land is a social fact that plays a considerable part in the history of family farming. It makes itself felt effectively just when the available supply of land becomes limited, thus giving rise to competition among those who desire to own and till it. When the bare land, in which no capital has been invested, becomes scarce, then the holder of property rights obtains from the land its economic counterpart, represented by the ground-rent.

The right of private property has an economic content, varying at different times and in different countries. We need only think of how it was exercised in an Italian rural commune of the twelfth century, in France before the revolution, in Russia before the emancipation of the serfs in 1861, in North America before the War of Secession, in Denmark in the eighteenth century at the time of the Reform, in India, in China, in Japan in the nineteenth century. Yet it offers *the possibility of separating the farmer from the land he tills*. The fact that the nature of the right of ownership may vary, passing from the absolute right as understood by Roman Law (*diritto quiritario*) to the mere right of receiving a rent, explains why in the several countries, even among educated people, the notion of property rights in land is associated with widely differing conceptions of rural life. In those countries in which peasant ownership prevails almost exclusively, and where tenancy and the other intermediary forms of agreement establishing a direct relation between the owner of the soil and the farm family are almost unknown, it is difficult to make people understand that the legal fact of landownership is something quite different and distinct from the economic fact of the family farm. This accounts for *the confusion that so often exists between the distribution of the land among the several farms and its distribution among the several estates*.

Few countries possess statistical returns showing both the distribution of the land as among the several owners, and the manner in

which that same land is distributed among the several farms. If this dual inquiry is not essential in countries in which the two phenomena practically coincide, it is found to be essential in those where the distribution of the land, considered from the standpoint of ownership, differs from its distribution among the farms, so that one and the same person may own more than one holding, or one holding may belong to several landowners.

*The growth of non-operating landownership is a fact of exceptional importance in the history of world agriculture.* In the first place it gives rise to ownership rights in the land as distinct from the exercise of the farming profession. Now, as the land is a limited quantity, this right inevitably gives rise, with the gradual growth of population, to monopolistic situations. In the second place the rural life of whole nations has often come to be organized on the basis of this property right and their governing classes are drawn from among those landowners. Sometimes those classes, which secure the control of the State, guide the peasantry towards improved forms of agriculture and prepare a better future for them. More frequently, however, they are less interested in the progress of agriculture than in maintaining the position they have acquired, and reinforcing it so as to preserve and increase their incomes from ground-rents. In such countries, unless the growth of the rural population be matched by the rapid growth of a strong industry and active trade, the condition of the agricultural classes will become more and more difficult. Peasant risings, so frequent in history, and of which we have seen impressive examples in the last fifty years, arise from the need the rural masses feel of freeing themselves from a political and economic power that takes no direct part in the agricultural enterprise and makes no contribution to the advance of agriculture.

This is not the right place for describing the relations existing in the several countries between landowner and farmer. An exhaustive inquiry would show, however, that all over the world a slow but steady movement has taken place in the last few centuries and has been speeded up in the last 150 years, which aims first at eliminating more or less parasitic types of middlemen who come between the landowner and the farmer, and then at replacing the non-operating landowner himself. This movement is identified with the steady progress of operating landownership in the modern world. In Finland as in Denmark, in France as in Germany, in Italy as in Ireland, the family farm is steadily gaining ground, even if it presents itself in very diverse forms, depending on the varying density of the rural population and the systems of farming in use. Taught by a not always

happy experience the peasantry of east Europe, and of a large part of western Europe also, have won the ownership of the land they till. They have still, however, far to go. The family farm has defects and drawbacks which hinder the inadequately trained farmers from associating social progress with the progress of production. This explains why, in periods of rapid development, peasant farming gives rise to so many doubts and is so variously judged by students.

Capitalistic farming, that is to say the cultivation of the soil and the raising of livestock organized by an entrepreneur who employs wage-workers, is, relatively speaking, a limited phenomenon. Remote precedents, described in the pages of history, were noteworthy as individual manifestations, but spatially restricted.

In recent times capitalism has acquired importance in agriculture in those countries in which great industrial developments have induced large masses of the peasantry to leave the fields, thus giving rise to the problem of how to operate the abandoned lands, or else in countries recently colonized by white people, when the capital accumulated in the Old World sought profitable investments in the colonies and in new continents. This led to an agriculture characterized by the intensive exploitation of the soil, large-scale use of machinery and the employment of a small number of wage-workers.

The European manifestations of agrarian capitalism other than those of feudal origin, bound, that is to say, to the fortunes of the families who owned the land and were rarely themselves engaged in agriculture, have been of brief duration. There are cases in which such capitalistic farming has managed to last for many centuries. This has been the case in Italy in the valley of the Po river, because the agrarian capitalists have not only reclaimed swamps and irrigated dry and sandy lands, but have invested vast capital in building roads, houses, canals, making tree and bush plantations, in levelling ground and providing livestock and machinery, lands which thus organized have given rise to real industrial farming. In such areas capitalist agriculture, employing large numbers of labourers, who are more like industrial workers than peasants, has held its own against the forces that are everywhere striving for the prevalence of peasant farming; their success is due above all to the fact that in such cases capital has played its full part in the social structure and satisfied the needs of modern society. The valley of the Po and some departments in France, some of the English counties, and some regions of the United States, Canada, Australia, and Argentina offer striking and splendid examples of the contribution made to agricultural progress by capitalistic organizations.

Generally speaking it can be said that in zones where large investments have been made in land and agrarian equipment to assure active and intensive farming, capitalistic estates have successfully held their own in the struggle with the peasant holding. The latter cannot easily take the place of the former for the following reasons: (1) the size of the peasant holding is generally far below that of the capitalistic farm and it would therefore almost always be necessary to divide it up in an irrational and costly manner; (2) the labourers employed by the capitalistic farm would be the natural candidates for taking over the workings of the new peasant holdings, but they are almost always without capital and lack adequate training in agriculture and marketing; (3) frequently the capitalistic farm secures high production at low cost by making a larger use of implements, machines, and fertilizers, so as to supply the market with products that it would be difficult for the peasant holdings to deliver at once.

But when capitalistic farming operates on bare lands or on lands on which no special investments have been made, then it can be replaced with comparative ease by the family farm and in this case the change need not necessarily be accompanied by notably lower production. Still simpler are those cases in which large areas of arable land have to be distributed among the peasantry who already tilled them and who continued raising the same crops in much the same way. Such situations arose after the First World War in a large part of eastern and southern Europe, more especially in Poland, Hungary, and Roumania. Peasant holdings of this new type are established generally by legislative acts; but their success will depend on the enterprise of the farmer and on the ability and willingness of the State to organize associations and co-operative societies able to afford efficient help to the new small-holdings. Co-operation, as has been clearly shown by experience in Denmark and in some respects among other countries, including Holland and Finland, is the pivot round which the efficient family farm must revolve. It should, moreover, be remembered that government intervention and good laws are not enough; certain fundamental personal qualities are needed that are rarely found in peasant populations who have hurriedly acquired the ownership of the land they till.

It is therefore essential that the transformation of the economic system take place gradually. This favours a process of natural selection which no bureaucracy, however diligent, honest, and experienced, can replace. The ability to work and make savings is always the touchstone for selecting from among the innumerable candidates

those who have the necessary preparation for organizing a family farm. One need only pause to reflect on the history of agriculture in the several countries to become convinced of the truth of this conclusion.

European history offers clear proof of the irresistible movement referred to above for the formation of peasant-owned holdings. Apart from what has occurred in the agricultural countries of east Europe after the First World War, and again after the Second World War, in other countries also in different ways, depending on their greater economic maturity, the peasantry have made great advances towards securing the ownership of the land they till. The reform recently carried out in Japan under the auspices of our eminent American colleagues, shows that there, too, peasant ownership is now predominant. It would seem that a like movement is taking place in China, and, however different the mode of procedure may be, also in India and in other countries of the Middle East.

The basic fact which determines the rise of peasant farming is to be found in the ratio between rural population and available land; that is to say in the density of the rural population. Indeed, in countries with a dense rural population, peasant-type structure is generally the rule and the first of these pathological symptoms so widely discussed in economic literature arises when the disparity between rural population and available land becomes acute.

In the more advanced countries the development of the family farm is generally accompanied by the rapid growth of industrial, commercial, handicraft, and professional activities. In such cases the familiar phenomenon of the rural exodus rights the balance. The pathological ratio between man and land is thus corrected, the pressure of the rural population on the land is relieved and the farm family can count on obtaining an area sufficient to allow of a better organization of the undertaking, thus assuring it a decent standard of living. But when, owing to the lack of enterprise or to the absence of the necessary physical and social-economic conditions, industrial, commercial, and professional activities do not develop, then the pathological conditions affecting peasant farming will be intensified to an almost incredible degree.

The reduction in the percentage ratio of the rural population in all the countries of western Europe and in some of the great lands settled by the white race (United States and Canada), is there to show that the development of sound farming of the peasant-type structure requires that the rural population be reduced; at the same time the

organization of the farm tends more and more to satisfy market demand, and agriculture offers new and important outlets for industrial goods (motors, machines, fertilizers, anti-parasitic sprays, petrol, &c.) and new trade currents are set going to assure the rational marketing of the products of the farm exchanged for those of the factory.

In the United States only one-fourth of the work of the farm is performed by wage-workers. Three-fourths of the labour required for producing the formidable mass of products obtained each year in that great country is therefore supplied by the farmers themselves and their families. A considerable part of the five to six million farms that comprise the agricultural industry in North America offer important examples of typical family farming, which, however, rarely offers grave pathological aspects. Only in some of the southern States do we meet with the difficult conditions unfortunately all too frequent in south Europe.

The existence of pathological forms of peasant farming is due, as we have already said, to the congestion of the agricultural population. This is clearly shown in the case of India and China in the Far East; of Bulgaria, Greece, and some areas of south Italy in Europe. Here we find the keystone to the whole problem. The pathological forms generally arise when the percentage of the rural to total population exceeds 50 per cent. Thus in Belgium, Holland, Switzerland, Czechoslovakia, and in wide regions of France and Italy, where the percentage of the working population engaged in agriculture is less than 30 per cent. of the total working population, peasant farming is sound and vigorous. But in countries where that percentage greatly exceeds 60 per cent. of the working population (Bulgaria 81 per cent., Roumania 78 per cent., Yugoslavia 78 per cent., &c.) peasant farming shows ever more serious pathological symptoms. In these cases we find also the dangerous trend towards cereal monoculture (wheat or maize, or rice) as those crops assure the highest per-unit production of food calories, and therefore enable those populations to secure enough nourishment to keep them alive. In such cases peasant economy is by definition a poor economy, tending towards autarchy.

But when family farming, as in the United States, Denmark, Belgium, Holland, and Finland, and in important areas of France and Italy, is diversified, and when a large part of the crops are raised for the market, then it represents the foundation of national economy, the essential guarantee of orderly civic life. This agriculture has known how to effect the change from self-sufficiency to market economy and it has almost always created a strong, sound co-operative

movement which avails itself of the instruments of modern technology used to such good purpose by capitalistic farming.

There are regions where the rise of an active industry has led to a co-operative symbiosis between agriculture and industry as a result of which the rural families have become semi-urban, thus solving the economic problem and enabling peasant agriculture to recover its lost elasticity.

In past centuries family farming almost always found its balancing factor within the rural community itself, as some of the members of the farm family itself carried on home crafts which afforded economic stability to communities of that type. Modern progress has uprooted the home industries, which in some cases have not been replaced by national ones of a kind suited for employing the surplus rural population and providing them with the source of income they had lost. This has sometimes been due to objective needs requiring that a given type of modern industry be located in a given place, and sometimes it has been due to cut-throat international competition.

In such cases peasant farming has suffered severe losses and the living conditions of the peasantry have deteriorated, even though it be theoretically possible for them to purchase excellent goods at low prices. But it is in the best interests of industry to favour the recovery of peasant farming, for it is on a prosperous farming community that depends the formation of a sound market for the products of the factory.

The industrial and commercial progress of the agricultural countries is therefore the essential condition for assuring the gradual elimination of the ills which peasant farming suffers.

Industrial progress and the growth of trade therefore offer the most efficient means for rationalizing agriculture. It is no mere chance that we find the most progressive peasant economy in countries with a vigorous industrial development and doing a great trading business (Denmark, Belgium, &c.).

The Russian world offers different forms.

The countries of east Europe that gravitate in that orbit (Poland, Czechoslovakia, Hungary, Roumania, Bulgaria) confirm what we have said. By a series of land reforms they have replaced large- and medium-sized estates by holdings operated by their owners. A strong co-operative movement seems to have grown up to make less difficult the life of the new peasant holdings. Similar events occurred in the Russia of the Czars and in Soviet Russia during the first post-revolutionary period. The scanty information available on what is now happening to the agriculture of the U.S.S.R. does not allow us

to express a well-founded opinion. It may, however, be expected that the rapid industrialization now taking place in that country will gradually reduce the number of the rural population, thus bringing about conditions more favourable to the farmers.

Let us repeat once more that the deep-rooted cause of the serious pathological symptoms noted in peasant farming arise from the fact that a congested rural population lives exclusively on the income obtained from the land.

The pathological symptoms that usually accompany the more typical manifestations of peasant farming are well known and we shall merely list them here. They are:

1. malnutrition, accompanied by typical scarcity diseases (beriberi, pellagra, scurvy, trachoma, &c.);
2. high death-rate accompanied by a high birth-rate;
3. illiteracy;
4. tiny holdings, almost always insufficient to yield enough for assuring a decent standard of living to the peasant;
5. splitting up of the small-holdings into a great number of parcels of land, often at a distance one from the other;
6. primitive and often insanitary farm-dwellings;
7. scanty use of mechanical and animal power and abundant use of human muscular energy;
8. keen competition among the peasants seeking land, accompanied by a land-monopoly held by the great landowners;
9. high ground-rents paid to the landowners and to numbers of middlemen who come between the landowner and the peasant;
10. selfishness and backwardness of the peasantry, often leading to excessively hard child labour.

These ills, which more or less affect all peasant farming, become acute when the disparity between available land and rural population is very marked.

On the other hand, in those regions where industrial and commercial developments have reduced the numbers of the rural population, family farming has by its own efforts the means to secure a stable equilibrium and has thus regained its health.

The considerations we have presented afford a partial reply to questions postulated by some students, and recently by our colleague of Oxford University, John P. Maxton, for the purpose of deciding whether we should accept as inevitable the prevalence of family farming, or whether it should be fought to make way for industrialized agriculture employing wage-workers.

The question thus formulated is perhaps too theoretical to receive a satisfying answer. But however this may be, it is certain that in agriculture the cult of the colossal which flourished for some years has ceased once and for all, after the first large-scale experiments made in the Western World. They only confirmed that the optimum size for the agricultural undertaking, even if it be of a capitalistic type, is always a small one. 'The picture of the very large farm run on highly industrialized lines gives the practical farming man a sense of unreality', writes J. P. Maxton, and he goes on to say: 'Farming is an intimate business.' I think we all agree with these simple remarks, which lead us also to assert that, given the actual consistency and distribution of the rural population of the world, family farming is inevitable and it should therefore not be fought but rehabilitated.

The many remedies suggested by the several currents of political and economic thought for alleviating the difficulties besetting farming of the peasant-structure type are too well known to need repeating here. The legislation of modern countries has created a superabundance of institutions and enacted endless laws whose purpose is to prevent the excessive subdivision of holdings, encourage vocational training for the peasantry, improve sanitary conditions, control the evils of excessive competition, and assist private enterprise to consolidate split-up holdings.

I fear that agrarian economists have attributed too much importance to these forms of legislative intervention.

The laws can only make an efficient contribution to the progress of family farming when the basic evil from which it suffers has been curbed, that is, when rural congestion, which burdens the land with excessive numbers, has been relieved, and when the peasant family has thus been given the possibility of attaining a decent standard of living. Then and then only will active measures for providing the peasants with opportunities for vocational training and economic organization yield now unhoped-for results, as shown by the recent history of the countries of western Europe and North America.

For this reason it would seem that emigration flanked by the growth of industry and trade are the central problems that the countries where family farming prevails are called on to solve.

M. R. Benedict, *University of California, Berkeley, Ca., U.S.A.*

I wish to take advantage of the suggestion made earlier by the Chairman that we throw out some challenges as a stimulus to our thinking about these problems. With that in mind I am sure Professor Medici will pardon my taking exception to some of the state-

ments made in his excellent paper, and the conclusions implied by them.

In the latter part of his paper, he states:

> 'The legislation of modern countries has created a superabundance of institutions and enacted endless laws whose purpose is to prevent the excessive subdivision of holdings.... I fear that agrarian economists have attributed too much importance to these forms of legislative intervention.'

With this I can agree, but not with the subsequent conclusion that the recent history of the countries of western Europe shows a trend toward the relief of rural congestion, and an improving opportunity for raising the levels of rural living. I submit that, in fact, the tendency in many parts of the world, including western Europe, is the opposite of that suggested by Professor Medici. I do agree, however, that we need to examine carefully the underlying economic forces that are shaping the structure of agriculture, and not be led astray by well-meaning, but often unrealistic, efforts to create a new pattern by legislative action.

What I wish to emphasize is the powerful effect of economic forces and institutional factors in bringing about different patterns of agriculture under varying conditions. In some situations the drive is toward units that are larger than the family farm; in others it is creating or retaining excessive subdivision and unbearably low standards of living. What I think should be stressed, since our purpose is to be helpful in solving these problems, is that while we need this broad background of a global look at the situation, our real contribution will be made area by area. There is no one formula that will be appropriate for all the countries of the world. That is the first of three points I wish to make. The second is that we need to do some real searching to determine whether the family farm is an ideal we can accept universally and without question. There is an implication in Professor Medici's paper that that is what we all want, that it is the way things are moving, and, therefore, all we need to do is speed up the transformation.

My third point is that we need to know more than we do about the relationship between size of farm unit and the cost of production. If we are to foster and establish, perhaps by legislation, a particular type of farm, and a particular size of farm that is different from what would result through natural economic forces, we need to know the cost of the change we are proposing to make.

If we are to talk about the 'pathology' of the peasant farm we need to have some concept of what is a 'healthy' farm situation, since

illness is a deviation from health. We have not defined as clearly as we should the kind of an agricultural pattern we should strive for; nor is there universal agreement on objectives even in terms of our existing vague definitions. The central questions are: What is the present structure of the agricultural economy, what changes are occurring, and are these changes leading toward a more healthy situation? First, I think we should define more clearly what we are talking about. I regret the use of the term 'peasant farming'. To farmers in many parts of the world the word peasant has a connotation of class distinction and social inferiority that is exceedingly distasteful. Almost any farmer in the Western Hemisphere, if he were referred to as a peasant farmer, would be irritated, or more likely distinctly angry. No farm leader in the United States would dare to refer to his followers as peasant farmers. I think that would be true in Canada, in Australia, in New Zealand, and in Argentina, and possibly even in Britain. At any rate, what we are really talking about is the self-employed, working farmer. This is a broader category than the owner-occupier group which is the one frequently assumed when we speak of peasant agriculture in the European sense. There are many family farms which are not owned by their operators. They are, however, worked by self-employed farmers who for most purposes can be properly assigned to the group here under discussion.

Professor Medici takes for granted that the 'peasant' type of farming is the desirable one under virtually all circumstances. With some qualifications and exceptions which I will mention later, most of us would, I think, agree with that view. I would, however, raise considerable question as to whether the world's agriculture is moving so clearly in that direction. Certain areas are being forced into that pattern through planned action by governments. Other very large areas are changing in an opposite way as a result of economic forces.

We have, in the Western Hemisphere and in Europe, two very different backgrounds as to the origins of the patterns of agriculture that now exist. In Europe most of the agriculture has developed out of a feudal form of organization. Much of the Western Hemisphere was settled under a family-farm pattern. I refer particularly to countries like the United States and Canada, and others which experienced their major agricultural development during the nineteenth century. In the United States the family-farm pattern has persisted despite the fact that there was no legal requirement that it should do so. This was largely because the size of unit chosen in the early period happened to be rather well suited for effective use of the labour, power, and

capital resources of most of the families then engaged in farm operation.[1]

But now, in all of the newer agricultural areas of the world, agriculture is being rapidly mechanized. The influence of this change is in the direction of larger units. To what extent shall the very real economies resulting from such modernization be limited in the interest of other values that are widely cherished? In other words, what kind of an agricultural pattern is really desirable? Are we prepared to suggest a single formula, a single plan, for all the countries of the world and for all the areas in a given country? I believe not. In a number of countries the overriding objective is that of maximizing production even though this may have to come about at the sacrifice of some non-material values that are held in very high regard. This is the kind of problem faced by countries like India and China, and some of those in the Caribbean area. In lesser degree it presents itself in western Germany and in Britain. In some, at least, of these countries, a true weighing of the relative merits of a mechanized larger-scale agriculture as against those of traditional forms may very possibly point to something quite different from the kind of agriculture which implies a maximum number of small-scale, inefficient or only moderately efficient, farms operated on the traditional peasant pattern. If, under these conditions, we find that something other than the family-farm unit is markedly more efficient, we must, I think, at least scrutinize very carefully the assumption that the family-farm pattern is the only one that should be sponsored.[2]

Since this topic is far too large for discussion on a world-wide basis, I ask your indulgence in taking certain illustrations from our experience in the United States. As you probably know, large parts of the public lands were originally alienated from public ownership in the form of homesteads of 160 acres each (roughly 65 hectares). There were no restrictions on subdivisions or combinations of such units. As a result, there has been in recent years a rapid shift away from the family-type farm in some areas. This is especially true in the sugar-cane areas, the rice areas, and some of the wheat areas. There we are getting very high efficiency, but at the cost of giving up the family-type farm. I do not see a likelihood that, in such areas, the

[1] This statement applies to that portion of American agriculture which was developed with free labour. The areas where slave labour was used developed a quite different type of farm unit.

[2] It is recognized, however, that in some areas the increased political stability that may flow from having maximum numbers of farm workers attached to the land through ownership or other secure types of tenure may outweigh the merits of a possibly rather substantial increase in physical production.

methods of production will shift back toward those of the family farm. Instead we must, it seems to me, seek new procedures for making the status and condition of the farm worker more satisfying in an industrial agriculture setting.

In our over-populated, excessively subdivided areas, such as the older cotton region of the South, we are faced with an opposite and equally difficult problem. There, if we continue with the existing hand culture on small units, a worker may have an earning power of little more than a dollar a day in ordinary times. As a hired machine operator on a large-scale mechanized farm he may make five, six, or seven dollars a day. Here we must make a choice between a policy that fosters or preserves large numbers of small units yielding low returns to the workers, and larger industrialized units that can pay a higher return for the labour employed. Some of us undoubtedly will place a higher value on the relative stability of the small unit; others on the higher earning power per worker usually found on the highly mechanized, industrial-type farm.

To avoid prolonging the discussion, I shall state briefly the other main point on which I would like to comment. We should make a distinction in our thinking between pathological conditions that are due to a remediable fault in the structure of agriculture, and pathological conditions that are due to a basic over-population in relation to all resources. We are having in the present period, I think, a good deal of rather unprofitable discussion about universal industrialization in countries that are plagued by over-population of their rural areas. In many situations, selected types of industrial development do provide important possibilities for betterment. I think, however, that we tend to base our thinking too heavily on historical precedents and not enough on rigorous analysis of the conditions and forces we are faced with in the world of to-day. Britain, Germany, and the United States are the striking examples of countries in which rapid industrialization released the pressure of population on the land. The results that occurred there were, however, to a large extent historical accidents. They were made possible by the particular set of conditions that existed at that time. Britain achieved a dominant position because of location; of certain types of resources; and an early start, together with noteworthy talents for invention and organization. The United States and Germany also had great mineral resources, and were able to profit greatly by the 'know-how' that had already been developed in Britain. The timing was fortunate for them. There were still enormous unfilled markets, and trade conditions, both internally and externally, were relatively free. It would, I think, be a serious mistake

to assume that this pattern will necessarily be repeated in the areas that are now seeking to solve their problems through rapid industrialization.

It is obvious that in some of these countries the basic resources for major industrial development do not exist. Also, if all of the agricultural surplus-producing countries were able to industrialize quickly, the impact on the already developed industrial nations would, of course, be very severe. Are we not in some danger of discarding too easily one of the oldest and most widely accepted principles of economics; namely, that there are important over-all social gains from specialization, both geographically and functionally? This is not to say, of course, that we should be over-impressed with the merits of the trade patterns of the past. On the other hand, I think we should beware of making an unrecognized assumption that the ultimate and perhaps the ideal situation is one in which every nation is sufficiently industrialized to supply its own needs for industrial goods, and perhaps have some for export. Nature designed some areas to be predominantly food producers and others to be the homes of heavy industry. We can modify that pattern, and possibly should do so, but if we distort it too severely the strains will be enormous, and we shall all be the losers thereby.

May I return now to a brief summing-up in regard to our central theme, the place of the 'peasant' farm in our agriculture? The principal question I have tried to raise is that of whether we are satisfied to accept the view that the family or 'peasant' farm is a suitable goal to strive for in all areas and under all conditions. Secondly, do we know enough about the relative efficiencies of large-scale and small-scale farms to arrive at sound conclusions on this matter? My third point was that we must study this problem area by area. We cannot and should not seek some one broad, universal conclusion in regard to it. The problem in Britain is different from that of the United States, Canada, Australia, or Argentina. That of Germany may be different from either of these. Also, political as well as economic considerations are involved, and the first of these may well have larger significance in some countries than in others.

I think, too, that within any given economy we certainly do not want to idealize some dead level of uniformity in agriculture. Are we going to say to the young man preparing himself for life, if you take up agriculture, you can only operate on the smallest possible scale consistent with making a living? If you go into manufacturing, into banking, into merchandizing, or shipping and transportation, you can have scope for any amount of executive ability you possess. But

in agriculture, if you want to deal with things on a larger scale and have the ability to do so, you must find your outlet in government, or get out into some other industry. There is, I think, another fallacy that is involved in that line of reasoning; the assumption that all farm workers are capable of managing at least a small farm. Any one who knows farm people intimately is aware of the fact that such abilities are not universal. In non-agricultural lines, there is universal acceptance of the fact that talents and executive abilities vary as between individuals. Is there reason to think the situation is different in agriculture?

A. W. Ashby, *Agricultural Economics Research Institute, Oxford, England*

Professor Medici has opened the discussion on this very big subject with a very comprehensive, broad, and clear treatment. If I criticize at some points that does not diminish my personal appreciation. I wish, however, that Professor Medici had not adopted the practice of using 'peasant farming' and 'family farming' as equal terms. If the two terms are necessary, if each term has any meaning, then specific meanings should be given to them. Peasant farming and family farming have one common feature by definition, namely, that in both types the major part, if not the whole, of the manual labour is provided by the farmer and his immediate family. Beyond that common feature there are many variations. As Professor Benedict has already said, it is impossible to say that the family farmer of the Middle-West of America, or of New Zealand, or of some parts of England or Wales, is the equivalent of the Alpine peasant farmer. The two equivalent statements are quite unacceptable.

I would like to suggest that with their common feature regarding the provision of manual labour there is a line of demarcation between these two terms. It is this: that the family farm is a type in which, while the bulk of the manual labour is supplied by the farm family, the contribution of capital to production is greater than that of manual labour, while in the peasant-farm type the contribution of manual labour to production is greater than that of capital. I believe that to be a feasible demarcation.

But looking at the paper as a whole, I entirely agree with Professor Medici's main diagnosis of the ills of peasant-farming—and note I am using the term 'peasant farming' in my own specific sense. Perhaps there are ills occurring in certain areas which he has not mentioned. Special features of peasant farming arise from the physical, economic, and social environments in which different systems

occur. Certain customs and laws which are sometimes associated with a system, but which are not necessarily part of it, aggravate its evils. Associated economic resources, like those of fishing, quarrying, and some forms of mining; or transport, and particularly development of small-scale industries, mitigate those evils. But the main points of diagnosis have been covered in the opening paper.

Having agreed with the main diagnosis, perhaps it will be expected that I should agree with the prognosis. Here we arrive at a situation which is common both in medicine and economics. The doctors agree on diagnosis: they do not entirely agree on prognosis or treatment. There is no necessary scientific weakness in this position, for the application of different specific treatments may effectively cure either physical or economic ills. There is, however, always a possibility that one treatment may bring undesired after-effects with the desired cure, while the alternative treatment leaves the patient free of any defects. Before commenting on the proposed remedies for the ills of peasant farming, I wish to draw attention to two points of detail in the opening paper.

Professor Medici has written (p. 19):

> 'The substantial uniformity of peasant psychology is due to the fact that all are alike governed by the cycle of production and are dependent on seasonal changes and on the life of plants and animals. The similarity is also due to the fact that in all countries the primary objective of the farm family is to build up a farm that will provide for their essential needs.'

After a long study of the literature dealing with peasant psychology or peasant mentalities and as much observation as is perhaps possible for any one person, I would definitely dispute that there is any such substantial uniformity of peasant mentality. The contents of the minds of peasants, their sentimental and their ideological tendencies, are always affected by (*a*) the mental climate of the nations and communities of which they and their local communities form parts and, (*b*) perhaps equally important, they are affected by the changes in the mental climate of different periods in the life of their nations and communities. Even within one country there is no such thing as a fixed peasant psychology or peasant mentality. If you are looking at the history of peasant institutions that fact is quite clear. But in any case the idea-patterns and the sentiments of different groups of peasants are shaped to a very considerable extent by the idea-patterns, the sentiments, and the behaviour-patterns of their general national groups, as well as by the socially inherited customs and current tendencies within the peasant group itself.

However, I am relieved to find that when he has more time and space to deal with peasant mentalities Professor Medici himself agrees with that statement. On pages 10 and 11 of that very excellent book, *The Agricultural Aspects of Italy*, which has been distributed to the Conference you will find this statement:

'The varied climate and agro-geological nature of the soil have contributed to render very dissimilar the rural populations of the various zones who reflect peculiarly the character of the land they inhabit. Their customs also differ, due to the fact that until 1870 they were the inhabitants of separate States. . . . Great are the contrasts for instance between the mountaineers of the Alpine circle and those of Calabria or Gennargentu (Sardinia), between the labourers of Emilia and those of Apulia, or the "latifundia" of Lucania or Crotone; between the share croppers of Emilia and those of Sicily, the vine-dressers of Monferrato and those of Salento and Ragusa; as also between the market-gardeners of Naples and of Sicily and the fruitgrowers of the Verona district; contrasts sprung from innumerable causes that in the course of centuries have created different worlds.'

This subject of the interpretation of the mentality of peasants, or of the mentality of family-farming groups, has great practical importance, and more particularly perhaps in respect of planning for the future. But it appears to me that no one can say the mentalities of peasants are the same in the highly individualistic, traditional peasant areas and in, let us say, Denmark, where a farmer may be a member of six co-operatives, accepting suggestions and directions at times from every one of them. This characteristic of independence in occupational activity which we so commonly attribute to peasant and family farmers has been taken away from them for their own good, very largely in Denmark and to some extent in Holland, and also in New Zealand, and, I am not quite sure, but I think in some parts of the United States. The men are told what they should produce, how they should produce it, and it has been necessary to do that for their own welfare.

The second point of detail with which I want to deal is that of the proportion of agriculturists in the total population. The opener has said that, when the percentage of working population engaged in agriculture was 60 per cent. or over, serious pathological symptoms occurred; between 50 per cent. and 60 per cent. pathological symptoms occurred; and round about 30 per cent. the communities showed sound and vigorous condition. Allowances have, of course, to be made for countries like New Zealand and for special areas in a number of countries with a highly developed export trade in agricultural produce. (I think also on a close consideration, an exception

may have to be made in another direction for conditions in which the agricultural proportion falls below 20 per cent. of the total occupied people, but I cannot stay to deal with this.)

It is on a later page of the paper (see p. 26) that a little more consideration and elucidation seems necessary. Here Professor Medici expresses this very commonly held view. 'It is in the best interests of industry to favour the recovery of peasant farming, for it is on a prosperous farming community that depends the formation of a sound market for the products of the factory.' This statement expresses a sentiment rather than an economic principle. The economic world would be much more satisfying to agriculturists in particular if the statement were valid in both respects. The chief facts of the situation are these. First, the proportion of national income enjoyed by the agriculturists (of most if not all nations) is lower than the proportion of agriculturists in the total occupied population; that is to say, using a simple illustration, where the proportion of agriculturists is 50 per cent. their share of the national income may be as low as 40 per cent. or even lower. In all known cases the proportion of income is lower than that of industrial workers. Second, practically all agricultural communities spend a higher proportion of their incomes on foodstuffs than the total of the non-agricultural population, and commonly agriculturists spend a higher proportion of income on foodstuffs than any single industrial or social group. It follows from these two positions that, number for number, agriculturists purchase less, and must purchase less, of the products of industries than other social groups. Two illustrative cases, although they may seem over-simple, may be presented. If an agricultural population representing half of the total enjoys only 40 per cent. of the national income, the chief consumers of non-agricultural goods and services will be their producers—the non-agriculturists. But when an agricultural population represents only 30 per cent. of the total and enjoys only 25 per cent. of the national income, somewhere between 75 per cent. and 80 per cent. of the market for non-agricultural products lies with their producers, the non-agriculturists. These, of course, are simple and indeed very obvious positions. If there were not a tendency to suggest some sort of metaphysical relationship between 'agricultural' and 'industrial' prosperity, such a simple analysis would be redundant. The position is, however, that we do not know what are either the causal or the quantitative relationships between agricultural and industrial prosperity and welfare. It is for this reason that a group of my colleagues have spent about two years on research into the economic relationships between agriculture and industry, and some social relationships

between agricultural and non-agricultural populations. It is too early yet for any definite statement of results, but it may be said that in every country to which the investigations have extended the agricultural population enjoys a disproportionate share of national income. Perhaps this statement did not need proof, but my colleagues have put quantitative measures on the position in several countries. And for those members of the Conference who are interested in the development of non-agricultural population and industries, it may be useful to say that there is a very obvious pattern of evolution which is something like this: When agricultural techniques begin to advance, and agricultural progress is being made, when the possibilities of industrial progress occur, the first thing that happens is an increase in the number of people engaged in extractive industries, but even at the maximum this is usually a low proportion of the total.

Here I would just like to throw out two suggestions to Professor Benedict; that some of the countries which are thinking now of industrial developments are not so bare of the big farms as appears; and that current requirements of plant in development of industry are considerably different from those of the early and middle nineteenth century.

In any case, the first thing that happens in industrialization is an expansion of extractive industries, whose workers may rise to something like 5 to 8 per cent. of the total group. The second thing that happens is an increase in manufacturing industries up to 38 per cent. of the total occupied persons, but not markedly exceeding that figure at any time. It follows that the great absorbers of surplus labour with the advance of agricultural and industrial techniques are the tertiary occupations—transport; material services—such as gas, electricity, and water; commercial and exchange services; personal services, and the professions. The summaries on the following page indicate the relative importance of the primary, secondary, and tertiary occupations in respect of general opportunities of gainful occupation.

Such proportions must affect all our thinking about industrial transfers from agriculture and affect it very closely indeed. It is necessary that every one concerned with transfers from agricultural occupations should realize the high proportion of occupied persons in modern societies which are to be found in this miscellaneous third group.

Professor Medici quite openly intends his primary remedies for the ills of peasant farming—that is, industrial development, occupational transfer, migration, and emigration for relief of rural congestion—to leave the peasant-farm system with its essential characteristics; or perhaps I should say, to turn it into what would be properly

described as a family-farm system. Apparently he is a whole-hearted believer in an improved individualistic family-farm system modified by some necessary forms of co-operative organization. Forty years ago most of the members of a conference similar to this would have immediately agreed with Professor Medici, though at that time there would have been some people to plead for various of the better forms of landlord-and-tenant system. Occupying ownership of land was one of the economic and social ideals which in Europe emerged from the French Revolution. It has not had a long history—a history at the most of 160 years or thereabouts. Although the system made great headway during the nineteenth and the early years of the twentieth centuries, it appears at least in its ownership aspects to have lost a great deal of ground during the last thirty years. And it must now be said that all Professor Medici's chief remedies for the ills of peasant farming are equally consistent with, equally necessary to, more radical changes in the organization of agricultural production: whether those more radical changes are of a capitalist, or a co-operative, or even of a collectivist type.

*Percentage of Gainfully Occupied Persons*

| | *Primary: Agriculture, forestry, fishing, mining* | *Secondary: Manufacturing* | *Tertiary: Transport, trade, and services* | *Total* |
|---|---|---|---|---|
| | | *United States of America* | | |
| 1820 | 72·6 | 12·2 | 15·2 | 100 |
| 1870 | 54·9 | 20·5 | 24·6 | 100 |
| 1930 | 23·9 | 28·9 | 47·2 | 100 |
| | | *Great Britain* | | |
| 1841 | 25·7 | 35·6 | 38·7 | 100 |
| 1871 | 18·5 | 38·6 | 42·9 | 100 |
| 1901 | 14·2 | 33·9 | 51·9 | 100 |
| 1931 | 12·0 | 33·2 | 54·8 | 100 |

Some countries have now had a fairly long experience of family farming under systems mainly of occupying ownership, of ownership operation, or mainly of tenant operation, or under a combination of ownership and various tenancy systems. On this experience no one can claim that ownership operation is a permanent or a self-maintaining system, or that it is economically and socially stable or always equally satisfactory.

Certain systems of tenancy have shown at least equal economic stability, and have given equal satisfaction. Indeed the economic

stability of any of these systems, and the satisfaction which they yield, are largely dependent on the economic, social, and juridical environments in which they operate.

Ideas, ideals, and behaviour-patterns of men are liable to change and in some environments they have changed during the last thirty years. Men, even peasants, have tried and are willing to try radical experiments. Competent and apparently unprejudiced observers judge that some of these experiments have succeeded. As economists or agricultural economists we are unable to say that the family-farm system is everywhere the best or the only one which will be satisfactory. We are quite unable to say that other systems will not be established or will not yield adequate economic and human satisfactions. If we say that all the available knowledge and energy should be given to the maintenance of a family-farm system, or to its improvement, and that more radical changes in the organization of farm production should be discouraged, that is an ethical or a political rather than an economic judgement. Many family-farm and peasant-farming systems need modification and improvement, some need very radical change and improvement. Possibly there are some which have gone beyond the stage at which improvement will yield the results which are economically and socially necessary or desired and which will be converted to the co-operative or collective type of agricultural production. In some circumstances it is necessary that agricultural economists should study closely the conditions of economic success in the capitalist, co-operative, and collective type of agricultural production. The world has suffered the building of many barriers, but no nation or community ever erected an entirely impenetrable barrier against ideas, or against records of comparative experience.

VON DIETZE, *University of Freiburg, Germany*

I should like to add some remarks about the distinction between family farming and peasant farming. Let me begin with a story. Twenty-five years ago I saw an English farmer near Oxford who had farmed in many parts of the world, the United States, Canada, South Africa, even, I think, in Australia. One of the party suddenly said to me: 'You Germans are unable to colonize', and before I could say anything the English farmer replied: 'I'll explain that. There are many German farmers in all parts of the world where I have farmed. They are our best citizens. When they have made for themselves a farm as a result of their labours, they stick to it, improve it in all sorts of ways, and leave it to their children. The next generation goes

on living and working that same farm. When we made a farm we sold it, and we made a fresh start somewhere else on double the acreage and that perhaps again and again. That is why we British succeed in colonizing whole continents.'

That is the difference between the peasant farmer and the family farm. The peasant sticks to the soil without any legal obligation, being unwilling to sell it even for much greater earnings, and that is what makes a peasant, or, in German, a *Bauer*. It is a great pity that we are unable to express all the differences of terms so that they are understood in all shades of meaning by all members of the Conference. I remember very well our late Vice-President, Dr. Warren, saying once that the tongue of the Cow-bell was the only tongue which was understood by all members without any danger of misunderstanding. If we use the word peasant the misunderstanding is apparent as has been shown to us already by Professor Benedict. People in a good many countries of the world are angered by being called peasant farmers. They think of a peasant as a medieval serf or something like that, something at any rate of very low rank. But this attachment of the soil, which in German we call *bauerlich*, has nothing to do with any medieval tradition of bondage or serfdom. It is a free tradition in many countries and it has existed throughout the generations even where the farmer is not an operating owner. It does not exist in all tenant conditions but it does in some.

On the point which has been made by someone that peasant farming results in a low standard of living, I would be inclined to reply as follows: If a country with a high proportion of rural population, say 60 per cent. or more, has a poor standard of living, it is not the family farm as such which is to blame, but the lack of efficient industry.

I agree with Professor Ashby's statement that we do not know enough about the relationship between agriculture and industry, and with Professor Benedict's warning against drawing too much from a limited historical experience. We are highly interested in scientific investigation on this subject. Unfortunately investigations which we started in all countries before the war have not yet been completed and some of the able men who were working on them are no longer alive. But we are going on with the work and it is one of the great things we owe to this Conference, that it enables us to get into contact with the ideas and the investigations to which agricultural economists in other countries are devoting themselves.

The family farm, in the sense of the self-employed farmer, has the essential distinction from a wage-earning system in that it can do without paying fixed wages. Thus, it is able to face times of depression

with fewer calamities than an entrepreneur employing hired labour. Even this point has already given rise to an economic theory of family enterprise or family farming which has given some remarkable results. Moreover, peasant farming is characterized by its voluntary attachment to the soil. It is not aiming at a rentability in the strict sense of the word. Not only is there a theoretical but also a practical consequence of these particular reactions and price relationships. During the depression in the 80's and 90's in Great Britain, agriculture as a whole was extensified, while in Denmark and Holland under the same quality of free trade, which meant the same price conditions, the farmer carried out a considerable intensification. The co-operative system developed in these countries in common with the performance of peasant farmers.

The final point which I would make is that there is a lessening significance in the distinction between peasant and capitalist farming. I confess I do not like the term capitalist farming because it is not clear, but I shall leave that aside. My point is that competition between family farms or peasant farming and capitalist farming is no longer of prime importance, at least on the continent of Europe. The great problem is between the family farm and the collective farm, and this is a problem which not only leads into ethical and political argument, but which also gives us the opportunity to ponder over the general economic order in which the community must live. Family farming, as our President said in his address, ought to help the farmer's independence, even in a modern State, if it is to continue to exist as a family farm. Collective farming, it is true, in some instances has developed on a voluntary basis, but these instances are communities usually based on religious conviction, the famous Amana, for example, in Iowa, and as a rule have not had many generations—in some cases not even years—of existence. I think we can therefore say without any prejudice, without any predilection for one system or the other, that family farming will flourish in an economic order which is free, while collective farming will not persist for any length of time except in an economic order which is based on principles of subordination and not of co-ordination. This is the more urgent competition, if I may say so, facing family farming and it is one on which our decision must be between an economic order based on subordination or on co-ordination.

This should not be taken to mean that we must have *laissez-faire*, or as an argument against co-operative or even some kinds of collective organization. But careful attention should be paid to the distinction between those co-operative or collective forms of organization which

are compatible with the general economic order based on co-ordination and those which are based on subordination. Especially in times of economic distress, farmers and their representatives are induced to support remedies which are not compatible with an economic order of co-ordination, and which subsequently and inevitably lead to an order of subordination, that is to say, into an order that cannot tolerate independent family farming.

Collective farming has one important feature in common with family farms. Just as the peasant has no obligation to pay fixed wages to himself or his family, so the members of the collective farm are paid as much or as little as is left from the gross output after all other outstanding obligations have been met. But the enormous difference between family farms and collective farming is: who shall decide on the conditions of sharing, the paterfamilias or a commissar? The commissar as an institution has even fewer inducements to act justly and humanely than a private owner of slaves has. For the commissar has not even an economic interest which prevents him from treating his subordinates worse than his cattle. As a person, of course, his conduct may be exemplary but it is a major social and human issue whether or not decisions of this kind should be taken by a benevolent officer ruling over many souls or by a father deciding for himself and his family alone. It is an issue which cannot be met by purely economic reasoning, or by calculation. As the President said in his address: 'Our International Conference of Agricultural Economists must deal with fundamental and urgent problems for whose solution humanity cries.'

A. Huni, *Swiss Farmers' Union, Brugg, Switzerland*

I have been very impressed by the way in which the problem of peasant farming has been treated by Professor Medici, and further discussed by Professor Benedict, Professor Ashby, and Professor Dietze. It would take me a very long time merely to mention all the points on which I agree. I hope you and they will bear that in mind when I express instead those points on which I disagree.

I confess the expression 'the pathology of peasant farming' sounds harsh to Swiss ears. Misunderstandings in the discussion of peasant farming arise from different kinds of experience and of different kinds of knowledge of peasant farming. I therefore fully agree with Professor Benedict when he said that the problem and its solutions differ from continent to continent and even from country to country. Switzerland is known as a land of peasant farming, but before I expand on that I must explain what we mean in Switzerland by

'peasant farming'. Professor Medici associated the expression with the family farm, Professor Ashby thinks that the family farm should only be synonymous with the peasant farm when manual work is mainly used in production.

I suggest that when we speak of peasant farming we do not mean a system of organization, but that intimate relation between men and soil which we find when the farmer farms not to get rich but because he is convinced that farming alone gives him full satisfaction, whereby he and his children care for the landed property he inherited from his father, and hand it on in good shape and high fertility to the next generation.

Let me give you examples. Last December I took a group of Nebraska farmers to visit a farm in Switzerland where the proprietor is very wealthy. He drives a big Lincoln car, not for show but for use. Nevertheless, at the age of 62 years, although he has no children of his own he will not stop working the farm he inherited from his father until he cannot go on any more. I could also show you farms where farmers show with great pride the pictures of three or four generations of the same family who have owned and worked the same farm.

Those members who travelled here on the tour saw farms where the young farmers are proud to hold their farms. I am sure that these members know already how these young folks tend the farm well and work hard until they hand over to their children. I remember the Italian-speaking Swiss peasant at Piotta in the mountains of Gotthard, who had spent more than twenty years in Paris, with an excellent business and owning some houses there, but he had come back just to farm the holding which he had inherited from his father; and he derived the fullest satisfaction from working that very small farm.

Switzerland has always had small farms, family farms, farms owned by the farmer who works the land. We never had great estates and landlords. Peasant farming in Switzerland, therefore, does not have the same problems as in many other States where there has been a land reform, an agrarian revolution to change the proprietorship of the land.

I would like to point out that nevertheless our farmers do not lack any of the real advantages of civilization. I do not say that every farmer has all these advantages, but it is not because he is ignorant of their existence that he prefers to remain a peasant even without them. You must remember that Switzerland is not an agricultural country. It now ranks as an industrial country, and the number of people engaged in agriculture, forestry, and fisheries is only 20 per cent. of all working people. That is another reason why peasant

farming is favoured. It employs more per 100 acres than would be otherwise possible. We want to maintain these numbers and not have a declining number of peasant farms.

In conclusion, I would like to say that I was very glad to receive lately a letter from the National Farmers' Union of England and Wales which had on the coat of arms the motto: *Labore agricolae floreat civitas*. It certainly does not mean merely agricultural work for money earnings, but agricultural work to build a good family and to help the State to utilize its land resources to the full.

G. SOLMSSEN, *Arnhof ob Horgen, Switzerland*

An investigation of the reasons and remedies of the pathology of peasant farming, so ably expounded by Professor Medici in his interesting opening address, must look upon this problem not only from the point of view of agricultural economy, but from a broader standpoint. The pathology in question is the typical result of modern development of economy as a whole. It is caused by the ever-growing gap which separates the workman from the final product of his work. Whoever has been called to administer large enterprises knows that the fear of want and hunger is not the sole cause of social unrest. Social peace depends to a large degree also on the success of the management in making the single workman feel that he is not a mere tool, executing certain mechanical functions in the fabrication or handling of goods, but that his understanding and his co-operation are essential elements in the productive process, to which he contributes with both head and hands.

One of the characteristics of peasant farming is the intimate and continuous link which the farmer and his family have with their work, beginning with the planning of the production programme, continuing through all phases of the productive process till the harvest is finished. This intimacy with the whole of production and the responsibility felt for its results makes the peasant farmer self-confident and personally independent. These qualities and the fact that he is to a large degree self-sustaining make him a strong pillar of stable government and immune against totalitarian ideologies. Switzerland is a splendid example of this kind of people. It is therefore in the interest of true democracy and economic and political freedom to conserve peasant farming so far as possible and to protect its existence even if, by the combination of peasant farms into large undertakings, greater quantities of food could be produced at lower prices.

But the protection given to peasant farming must be very careful

in the choice of its remedies. Subventions given to the farmers, paid at the cost of the other taxpayers, or to the detriment of the industrial sector of the country, and without demanding compensatory achievements, are not the right means. They do not go to the root of the disease to be cured. They only alternate the symptoms and try to remove its consequences. The real point from which to start is to attack those shortcomings of peasant farming caused by the victory of technique over space and time, eliminating distance, and making State borders slowly obsolete as economic barriers.

In order to adapt the peasant farmer to this economic revolution the drawback to be overcome is the one which arises when his production stops and marketing begins. At this crucial point the peasant farmer finds himself in a weak position, not only because he sells his products wholesale while he is compelled to cover his needs at retail prices, but also because, being locally isolated and unable to leave the farm as he likes, he lacks the direct and personal contact with the market and is out of touch with the factors influencing its ups and downs.

It is the great merit of the American science of agricultural economics that it has developed practical ways and means of protecting the peasant farmer to a certain degree against the shortcomings of his peculiar situation. He has been taught in the United States to combine with his fellow-producers of the same product in co-operative marketing societies and by doing so to regulate his production according to the needs and possibilities of the market. The latter has been achieved by the ever-expanding system of grading and state-assisted standardizing of farm products, sorting them into grades of uniform kind, quality, and size. This union of producers into marketing organizations and the reduction of products into recognizable grades and marks secures for the peasant farmer badly needed access to the methods of modern economy, without compelling him to give up the essential characteristics of the peasant structure.

The far-reaching importance of this organization attained in America has not yet been fully recognized in continental Europe. We follow only slowly the course which the American agricultural economists have developed with excellent results during recent decades. In consequence there are only relatively few professional chairs in agricultural marketing and the literature is small when compared with the multitude of American handbooks and treatises published on this subject. After the First World War more interest was shown and standardization of certain farm products was initiated. But the structure of this organization as a whole is still far from being

accepted on this side of the Atlantic. There seems to be a great fear that by adopting these methods (as has been done, for instance, in Denmark with remarkable success) the peasant farmer might become an industrial workman and lose his independence. This opinion is wrong. It neglects the fact that the system is based upon self-government by those participating in it, and that its principal effect on the producer is that it teaches him to produce what he can sell most advantageously. Through this self-adjusting education in the production of the right qualities of graded and standardized goods, order is brought into marketing chaos and the peasant farmer becomes freer than he is if he remains in his individual isolation. In addition, grading establishes such standards that the characteristics of the goods can be shown in a distinct universally comprehended way that they can be bought and sold without reference to their origin. As both parties of the bargain have the same exact definitions in mind, there is a short-cut between producer and consumer, and marketing opportunities are widened and the cost of distribution lowered to the advantage of all parties concerned.

The reluctance to apply the experiences gained elsewhere with this progressive structure of peasant farming is all the more incomprehensible, as only graded and standardized farm products can rank as collateral for temporary credit. This form of credit is used in the United States very effectively in combination with cold storage and the provisions regulating the issue of warehouse receipts. By this practice the farmer is able to convert his goods into cash without being compelled by circumstances to sell them when the market price is at the time very unfavourable for him. He can then sell when he wants to, and not when he must, the more so as the cold storage enables his products to be kept in good condition over longer periods. The great advantages of this kind of revolving credit are obvious, when compared, for instance, with a farm mortgage which forces the farmer to work a very long time for his creditors.

I feel shy of outlining in this superficial way the results of transatlantic experience in the presence of so many well-known American and overseas members to whom all that I have said in this connexion is a well-established assumption if peasant farming is to keep pace with the demands of modern economy.

I fully agree with Professor Benedict and Professor Ashby that it is impossible to treat the peasant-farm problem as though it were the same in all countries and continents without regard to the fundamental diversities of their political and economic conditions. Modern farming demands such a vast knowledge of natural science, chemistry,

engineering, and marketing, that it makes a great difference whether it is practised by a peasant hardly able to write and read, or by one instructed by a high-level school education and an intense professional training. It is this kind of diversity of basic conditions which creates the danger of competition of superior quality from commodities produced in distant countries, and compels the peasant farmer to keep abreast of achievements elsewhere and not to stick to antiquated methods of production and marketing. To act otherwise places sentimentality before reality.

The modernization of peasant farming is a concern of all other branches of economy, because the more it flourishes, the more it is an important customer for industrial goods.

Whether the peasant farmer should be owner or tenant of the land he tills cannot be answered globally. The self-owning farmer is of course the most desirable type and will prevail where farming is carried on on a sound basis. A condition of the welfare of this type is, however, that the farm should not be overburdened with mortgages. At any rate, where the modernization of peasant farming is the aim, tenancy can contribute very considerably to its achievement, because it makes the private capital of non-agrarians contribute to the investment in new developments. A further advantage of having both ownership and tenancy is that the latter gives second and third sons of peasants who are not able to buy a farm with their own money a chance to remain in the profession in which they have grown up instead of becoming industrial workers. In the interest, therefore, of the effective solution of the pathology of peasant farming such practical co-operation of industrials, merchants, and bankers with farmers by the way of well-regulated tenancies can be an essential help.

J. F. Booth, *Economics Division, Department of Agriculture, Ottawa, Ont., Canada*

I would like to join with others in complimenting Professor Medici on his paper. It is unfortunate that one who presents such a paper is unable to develop, as he would undoubtedly wish to do, all of the points that he brings out, because it leaves him open to the attack of his audience. I hope, however, that he will not mind if we question some of the points that he has raised.

Professor Medici (p. 19) states 'Diversified agriculture improves the standards of living of the peasant.' Now I assume that he is using the term 'peasant' to apply to all farmers and if so I wonder if what he states is always true. There are undoubtedly many instances in which diversified farming improves the nutritional status of the

farm family by giving them a variety of foods to consume. I think it could be shown, however, that in many areas the added income from specialization and commercial production has added variety to the diet. I feel sure it has raised the standard of living in general.

The standard of living of urban people was not higher when every man made his own shoes and his own clothes. Specialization in the manufacture of such products reduced costs, increased the quantity for sale, and raised the standard of living of those who produced. More shoes and more clothes were made available for everyone. So it is with farming in many areas. Agriculture may derive less benefit from specialization than urban industry but it is nevertheless subject to the same general law. Diversification may under some conditions lead to inefficient use of the factors of production. If diversification leads to having some people doing things that other people can do in much less time, as I suspect it may in some instances, surely it must reduce rather than increase the standard of living in such cases.

Professor Medici also referred in his discussion of pathological ills to the possibility of emigration providing a solution to the problem of over-population. Some day we may agree that restrictions on immigration have been only slightly less harmful to the world than restrictions on trade. There may still be countries that would benefit from increased population resulting from immigration. There would appear to be possibilities in the tropics for some of the surplus population of other lands. It is doubtful, however, if the immediate solution to the problem of over-population in the rural areas in many parts of the world can be found in emigration.

Turning now to a point raised by Professor Medici and commented on by Dr. Benedict, namely, the association of trade and industrialization. Dr. Benedict stated in effect, that if rapid industrialization occurs in the under-developed countries the impact may be serious on the already developed countries.

It would be unwise to be dogmatic on this question. Much depends on what is meant by 'rapid', but speaking very generally it would seem that industrialization has increased, rather than decreased, the trade between nations. The experience of Canada and the United States is a case in point. Both were originally agricultural nations. Both are now highly industrialized countries and the volume of trade between the two has increased as industrialization has developed. Everywhere we see evidence to support the conclusion that trade between the developed countries, which are also the highly industrialized countries, is greater than that between undeveloped countries, or between developed and under-developed countries.

M. L. DANTWALA, *Indian Society of Agricultural Economics, Bombay, India*

If Professor Medici will permit me, I would like to congratulate him on his remarkable acquaintance with the pathological aspect of family farming. In the literature that one often comes across on this subject, attention appears to be confined to what has been called the 'ideal' type. Professor Medici has done well in sharply drawing a distinction between the 'ideal' and the 'pathological' types of family farms. For us, coming from Asian countries, the distinction is very germane.

I wish to submit further that the difference between the two types is so basic that it is misleading to call them by the same name of family farm. Professor Medici has pleaded for raising the pathological type to the ideal one. In my humble opinion this is basically impossible in a vast number of cases. My reason for thinking so will become clear, to some extent, by the illustration I give below regarding conditions in India, where the pathological aspect of family farming is the dominant feature of the agricultural economy. I have a table before me which shows the average size of holdings in the various Provinces of India. The highest recorded is that for Bombay, namely 11·7 acres, and the smallest is for Bengal and Assam, being 2·4 and 2 acres respectively. I shall give more details about Bombay Province which is a Ryotwari area, which means—theoretically at any rate—that there are no intermediaries between the State and the cultivator. From the tenure point of view, therefore, Bombay is a region of peasant farming.

I have talked about the average size of holdings. But the average, as we know, may not—and in this case does not—give a true picture of the nature of the holdings. A study of frequency distribution reveals that there are extremes and a very large percentage of holdings are below 5 acres. A recent inquiry in Bombay showed that 42 per cent. of the total number of cultivators possess less than 5 acres of land. The percentiles quoted below bring out the skewness of distribution. Ten per cent. of holdings have a size below 0·71 acres, 30 per cent. below 2·97 acres, and 50 per cent. have below 6·80 acres.

But even this is a story of the *total* holding of a cultivator. All of a holding is not necessarily at one place. Only 31 per cent. of cultivators covering only 18·2 per cent. of the cultivated area had their holdings in a single block. The rest had anything between 2 and 20 fragments each. 7·2 per cent. of the cultivators had their land in more

than 10 fragments each. The average size of a fragment, which usually constitutes a separate farm, is 3·46 acres.

Now my only submission is this: Can any peasant with such dwarf holdings, with all the supplementary aids that the co-operatives may bring, ever aspire to efficient farming? It is misleading to describe these farms by the same name as is given to the peasant-operated farms, say, in the U.S.A. They have nothing in common with the 'ideal' type whose praise we hear so often. They provide neither full employment nor a decent standard of living to the farmer and his family.

The question of an ideal tenure does not depend only on right values, it depends equally on the objective economic situation; and that for the majority of Asian countries is an excessive pressure of population on a single resource, namely land.

Hope is expressed that the removal of rural congestion with the help of emigration flanked by the growth of industry and trade will cure the pathological type of many of its ills. I have no doubt these are the right remedies, but I am not equally optimistic about the speed with which they can accomplish the task. The question of emigration is bogged in political and racial prejudices and the economist is pretty helpless in the matter. Industrialization too is not a mere matter of wishing. Its pace is determined by objective economic—besides the political and the social—facts, such as capital accumulation and the technical 'know-how'. A query must also be made about the extent of the 'surplus' rural population and the potential capacity of industry and trade to absorb it. Anyway, this is a slow and long-term remedy. Will the rural underdog patiently bear the delay and will we succeed in persuading him to stay his hand?

We may have to explore other alternatives. The choice is not necessarily between the cult of the colossal, capitalistic or collective, and the family farm. There is a middle way of co-operative farming which may bring these two- and three-acre farms together into one of a reasonable size. By this we will be able to postpone for some time the problem of the displacement of the surplus population. True, it may not, in any large measure, alleviate the poverty of farmers, but it will certainly alleviate to a great extent the poverty of agriculture—if I may make that distinction. The size of the unit of cultivation will increase, though the *per capita* ownership will remain as meagre as before.

We in India may have to 'fight' the family farm, not because of any of its intrinsic shortcomings, but because it is a luxury which she cannot afford.

M. Bandini, *University of San Pietro, Perugia, Italy*

I want to examine briefly one of the points that have been dealt with by Professor Medici in his paper. The point in question is the fragmentation of rural properties and in particular the small peasant property. I would give my remarks the title 'That which is living and that which is dead in the problem of the fragmentation of rural properties', because I believe that there exists one section of this vast problem which is still of outstanding importance in practical developments that are still going on, while there is another section which in all probability no longer has any reason for existence and ought to be considered, as Professor Medici has already indicated, more as an academic exercise than as a concrete issue.

I shall start with one or two definitions of a concept which you all know but which it is perhaps opportune to repeat. When a property or an agricultural holding is divided into different pieces separate from each other, the phenomenon, in mountainous country particularly, is called 'fragmentation'. When the pieces are, or tend to become, too small to be cultivated on a reasonable system the phenomenon is called 'pulverization'. The literature of agricultural economics is full of studies on this problem. The writings of agricultural economists have always attacked this evil. They have suggested (*a*) remedies designed to eliminate the evil in places where it is already in existence, such remedies, for instance, as the consolidation of splintered properties, or (*b*) preventative remedies, i.e. to prevent the evil from developing, such as the expedient of making it illegal to divide the unit of cultivation; as, for example, the German *Anerbenrecht* or the idea of a minimum unit of cultivation for a family which has been recently introduced in the new Italian civil code. Since the régime hereditary subdivision has been chiefly responsible for all this; it is common to invoke legislation which would reinstate the system under which there is a single privileged heir while the other sons have to go out into the world to follow whatever career they can, if the undivided agricultural holding does not have room for them. When the followers of Karl Marx turned their attention to agricultural problems, they split into two factions. One saw the small cultivated property as the ideal and asserted that this fulfilled completely the requirements of social-communist ideals, in so far as one would be concerned not with a property of the bourgeois type, but with a property which would be the complement to work. In other words, the peasant would possess land by the same title by which a carter would possess a horse, or a surgeon would

possess his scissors, or his forceps, or his bone-saw, or any of the other instruments which delight humanity.

The other faction, on the other hand, despised the small peasant property and directed its thought towards large collective establishments, more modern, more productive, and more suitable for absorbing modern technique. In order to criticize the idea of the exponents of the first school of thought, the followers of the second focused attention on the process of continual fragmentation in Europe and, animated with a messianic spirit, prophesied a time when the small property would be effectually dispersed and lost in a confusion of miniature splinters of holdings, good only to supply a morsel of bread and vegetables for the table of the impoverished worker. Much has been prophesied about this fatal process of decay and about the tragedy of fragmentation. The great agricultural economist, Arthur Young, in the years 1770–90, began to see all the woes of the small property which, right from its commencement, had been sick with an incurable malady. This history continued on in the nineteenth century, despite the fact that one of the most acute observers, de Tocqueville, had demonstrated that things were not proceeding directly towards that end. There is no congress to-day, no meeting of international organizations, no academic or scientific treatise in which the problem is not brought up once more and rediscussed. There never fail to be recommendations and resolutions formulated to the various governments urging them to do something about it. The famous olive-tree which was discovered some decades ago, whose ownership was divided between three people, while the land on which it grew was the property of a fourth, has become celebrated as material for study, fit to be compared for its scientific importance with the skull of the Potecanthropos erectus, or with the flower which helped Gregor Mendel to discover the phenomenon of the dissociation of characteristics. It is high time this complex material was examined critically so as to see if it really amounts to anything important, or whether it has become simply a form of academic question.

Let us look first at the curative remedies of the evil. There is no doubt, that in many regions the policy of consolidation of fragmented holdings has yielded results and may still give results. It is also indisputable that there still exist regions where decisive action on the part of the State to enforce a compulsory reorganization of fragmented estates, can give excellent results. But it is equally true that the evil is restricted to particular regions. It is not inevitably connected with the historical evolution of landed property and with small landed

properties in particular. Many of the features of fragmentation are absolutely unavoidable and are physiologically justified. To have a holding divided in several parts is often the logical consequence of practising different types of cultivation which dovetail with one another and so bring about a more regular distribution of work throughout the year.

In mountain country agricultural holdings have an organic structure and are composed of meadows in the irrigated valley bottom, of dry tillage land in the middle regions, and of pasture in the higher parts of the mountains. It is inevitable that it should be so, and there are many familiar examples of holdings which have some fragments of cereal land in the plains where the grain matures early, and others in the hills where it matures later. If they had only the one portion, either all in the plain or all in the hills, the labour would be insufficient for the harvest, which would all fall in the same period. Vineyards are often found in the sunny parts of the hills, while tillage may be found on the opposite side and meadows in the valley bottom. What sense would there be in uniting these pieces?

It is therefore necessary always to distinguish physiological cases from pathological cases of fragmentation. These latter do exist but they exist to an extent very much less than is commonly believed. Also, is splintering always an evil? Look at the cases in which this is combined with other activities of the worker, industrial, commercial, and even maritime. It is wrong to judge the matter only from the agricultural point of view. One must look at it rather in relation to the whole economic complex.

Look also how these small properties often find their own remedy by the intensification of the productive process. Holdings of two hectares which previously appeared absolutely inadequate and uneconomic, now function on perfectly sound economic lines by developing irrigation and seed mixtures and specialized processes of cultivation. Turn to the preventive remedies. Many of these take certain hereditary institutions as a model and seek to prevent agricultural properties from being divided up on the death of the head of the family. Others coming down to a greater detail, drag in the comparative psychology of the different peoples. Certain peoples, they say, have the idea of a privileged single heir in their blood; for them such a system will work very well. But the Latins are individualists; for them equality between sons is a dogma of faith. Therefore what works very well with some, just will not work with the Latins because the psychology of the people is against it. We do not attach too much importance to this argument. There is in Italy

a marvellous opportunity to study this question, namely, the Alto Adige. This is divided into two parts, that with a Germanic population to the north, and that with a Latin population more to the south. In the period when the Latin principles of legislation came into force there, after the First World War, when the Alto Adige was attached to Italy, it became possible legally for properties previously indivisible to be divided. It was noticeable, however, that in the Germanic part the practice, though no longer enforceable by law continued by custom, and so the *geschlossener Hof* continued to be the privileged heir. The Italians continued to divide their properties among all sons without distinction. It appears, therefore, to be a question of psychology, until closer observation shows that this is not so. The practice of hereditary subdivision occurs in those places where the subdivision would not damage the system of cultivation, while the system of non-divisibility is maintained where the economic conditions of the holding would be gravely impaired by subdivision. It is therefore a question of economics and not of psychology. Indeed, in this same region of the Alto Adige, it may be observed that in the Germanic zone, in places where the system of farming permits of the holding being subdivided without economic damage, such as vineyards, orchards, specialized cultivation, meadows in the valley bottoms, and so on, the hereditary customs have been immediately abandoned. On the other hand, where there are mountain farms which would sustain great economic damage from subdivision, the old system has been maintained.

But there is more to it than that. Last year I went to visit the region of Italian colonization in the Brazilian State of the Rio Grande. There was a country of compact farms of a uniform size of 25 hectares which had been established from about 1875 onwards, covering a total area of about 2 million hectares. The peasants were all of Venetian or Trentino origin. Yet there, with families as Latin in temperament as could be and descended from families which for centuries had always divided the farm in equal parts between the sons, the system of the indivisible farm had been completely adopted quite spontaneously for the 60 to 70 thousand farms in existence. Not a single one in seventy-five years had been subdivided. Instead, they have all been left to a single son. The other sons were employed on other farms or had left agriculture. But we have been able to satisfy ourselves that any subdivision of these compact farms would have been most damaging from the economic point of view.

The enforcement by law of indivisibility of farms and holdings in regions where economic conditions do not demand the maintenance

of this unity, can be extremely damaging and can hamper the acquisition of property by the better peasants. For it is very difficult for these people to create a farm by the acquisition of a single block of land, and in general they do it by acquiring one piece and then another piece by means of savings built up over many years. If these better peasants had to find a complete farm on the market, it would be more difficult for them to pass from the rank of wage-paid employee to that of an owning occupier. It is also worthwhile considering what was said about this argument in former times by a noted French author, namely, de Faville in his *Morcellement*, and more recently by a noted Italian economist. How can the law effectively impose indivisibility against the interests of the small owners themselves? Everything would reduce itself to a simple question of form. The farm, most probably, would remain a single unit in the records of the cadastral section involved, while the peasants, equally probably, would divide it up on a friendly basis amongst themselves. Or, at the most, they would come to a mutual arrangement whereby one went to work in the right-hand part and another in the left-hand part of the old farm on the basis of each working for himself. Perhaps they would keep the pastures undivided, because they did not lend themselves to too much subdivision. In reality it is the different economic circumstances which made the Germanic legislation effective and which created the custom or, if you like, the psychology, which enables it to work, just as it is economic causes which have brought it about that the new provisions of the *Codice Italiana* have been in reality dead ever since they were born.

On the other hand, the American 'Homestead' was not a dead thing, because of the particular economic conditions in which it developed. It would immediately become an inanimate puppet the moment one tried to apply it in regions or countries or epochs where those conditions did not obtain.

In conclusion, what is living and what is dead in all this problem?

The usefulness of promoting the unification and consolidation of landed properties in places where fragmentation genuinely is a pathological phenomenon—this is a living thing. But it is a dead thing to seek to do this in the extremely numerous instances in which fragmentation is a logical phenomenon and economically sound. It is a living thing to codify in law certain customs of inheritance based on the indivisibility of farms and holdings when such customs derive from obvious conditions of economic convenience: but it is a dead thing to impose by law customs which are good for the conditions of other countries or other times, but which, in the country or the

time in which one seeks to apply them, run exactly counter to the requirements of logic, of economics, of tradition, of psychology, and of good sense.

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Having had the advantage of listening to Professor Medici's paper this morning so soon after spending a few weeks in the company of all sorts of agricultural experts visiting various places in Britain and Europe, I may be allowed to offer a few comments on this matter with a greater measure of assurance than it would have been possible for me to do a few weeks ago from first-hand knowledge of Australian conditions only.

The issue of which I was conscious during the whole of Professor Medici's paper was that he appeared to assume that peasant farming is in itself (*a priori* so to speak) an ideal; and an ideal which if not already achieved should be generally aimed at, at least in Europe. Why this should be so was not wholly clear to me. Nor was I able to satisfy myself as to which particular standard of peasant farming, that is to say at which particular point in time and history, this ideal belonged.

I was forced to conclude that the ideal anyway envisaged by Professor Medici was one in which the peasant farmer was to share in all the advantages of modern plumbing, electricity, tractors, and farm machinery, and the rest of the advantages accruing from large-scale industrial enterprise, but he was still to retain and enjoy all the privileges and advantages of that way of life connoted by the term 'peasant farming'.

I quote Professor Medici's exact words (p. 24–5):

'The development of sound farming of the peasant-type structure requires that the rural population be reduced.' Now there are, in a broad way, three methods by which surplus populations, rural or otherwise, can be reduced. They can be killed off (and that has been tried as a considered policy in various parts of the world). They can be emigrated to other parts. Or those who remain can practise birth control. The first method does not always appeal, and the last is an art in which, so I am given to understand, the populations of certain countries have not achieved a high stage of proficiency.

Is it not somewhat paradoxical that Professor Medici makes a strong plea for the retention of a small-scale rural industry which can only exist at the level and standard of living which he envisages on the assumption of the existence of a large-scale industrialized economy. The picture to which our attention is drawn, and the ideal which is held up before us, is, if you look at it in reverse for a moment, masses

of workers crowded into big cities and suffering all the disadvantages of 'industrialization', producing cars, refrigerators, electric power, and all the rest of the equipment of our modern civilization, to supply at minimum prices to 'peasant farmers' who are to enjoy all these luxuries without sacrificing one bit of *their* way of life, enjoying, *all* the time, *all* the advantages of the quiet, peaceful, and simple rural existence which the average industrial worker struggles to try and enjoy for a couple of weeks only each year, if he is lucky enough to be able to afford a holiday! It seems to me that while some may protest that my presentation of the issue in this way is somewhat exaggerated, it does appear on the whole to be a reasonable and logical deduction. It seems we are trying to find arguments and reasons for giving our peasant farmer the best of both worlds and I have not been able to find yet the answer to the quip about having your cake and eating it!

Later we were told that 'it is in the best interests of industry to favour the recovery of peasant farming, for it is on a prosperous farming community that depends the formation of a sound market for the products of the factory'. Now, of course, the inescapable deduction from that sentence is that a prosperous farming community is necessarily identical with a peasant-farming economy—and I suggest that that is not a wholly valid deduction nor does history bear out any such contention. But furthermore, the other supposition already made is that the development of this form of farming economy requires a reduction in population. Which of the three methods I have suggested finds most favour with my friends I do not know, and I am sorry I cannot think of a fourth. But whichever way it is, this reducing rural population now has, in this later argument we are told, to form the market for the output of an ever-expanding industrial economy. Is not this a contradiction if not a dilemma? How can you expand the market for the production of one side of the economy whilst arguing that it can only prosper by maintaining another side of the economy which, by hypothesis, requires a stable or reducing population?

Finally, we were informed that 'family farming is inevitable and it should therefore not be fought but rehabilitated'. He also quotes our friend Mr. Maxton that 'a large farm run on highly industrialized lines gives the practical farming man a sense of unreality'. Well, I suggest, so does a mammoth hydro-electric station, on which so much rural development can depend, give a sense of unreality; so does a cyclotron where atom splitting is carried on—so does going through the Alps (and particularly at night!) give you a

sense of unreality. All these things are big (and especially the Alps as many of you here will for ever recollect) but it seems they are there and it seems they are likely to stay! What is the basis of the reasoning which would allow us to conclude from this that because we did not like them, and given certain other conditions, the converse is 'inevitable'? I do not follow this at all. But even if we were to pass this argument and admit the 'inevitability', what is the basis for the suggestion that because we claim something is 'inevitable' (which can only be true, however, at that particular point in time and under given conditions) that it should not therefore be fought but rehabilitated? If something is 'inevitable' can it be in fact rehabilitated? Does not this amount to a contradiction in terms?

In face of the inevitability of the hand of the President hovering over the bell to bring my contribution inevitably to a close, I cannot continue on to outline at length possible lines of solution to this conflict. I would suggest that it is neither right nor profitable that this subject be approached from the viewpoint arising from the conditions in overcrowded Europe only, after centuries of development, strife, and land hunger. Europe prides itself as the cradle of civilization—well 'modern civilization' such as it is—but it has also been and still is the source of much misunderstanding and many upheavals. To-day Europe cannot forget the existence of other continents (if it did, it would soon cease to exist at all!). We should develop a global outlook on the development of agrarian and industrial enterprises. And whilst it is even possible (though I would not myself at present agree) that the conclusions drawn by Professor Medici from one particular set of historical conditions, land tenure, and methods of farming, are right, the same traditions, customs, and conflicts have not developed anything like the same tempo or force in areas of the globe far more extensive and, with due respect, as equally important as that small corner known as Europe.

One possible line of solution which can be developed perhaps in discussion on later papers is the degree of co-operation which can be infused into agrarian enterprise. The problem of the age in both agriculture and industry would seem to be the search for the right unit for most efficient management, the optimum size unit. That I think was what Professor Dantwala of India had in mind in speaking earlier on this paper. And in searching for this optimum unit regard must be paid not only to place and time, but how to make the best possible use of supplementary aids in the form of power and machinery—and progress in the latter will 'inevitably' dictate a more elastic approach and attitude of mind than Professor Medici's paper

indicates. Selection of optimum size units does not necessarily involve collectivization in the sense in which that term is generally used. Professor von Dietze employed the term 'subordination' as opposed to co-ordination rather than contrasting co-operation with 'collectivization'. Subordination is perhaps a more appropriate term for what we generally mean by the type of farming called 'collectivist'. But if your form of grouping contains a minimum of subordination and a maximum of co-operation then the opportunity increases for a greater amount of sharing by all participating in any collectivist experiment. The big lesson, of course, to be learned is that the right to share in gains and profits carries with it an obligation to share the risks and losses—a lesson the whole range of the economy, industrial as well as agricultural, has yet to learn if it demands measures to maintain full employment.

And so I suggest in conclusion that efforts bent in the direction not of 'rehabilitating' peasant farming as such or turning farms into 'collectivist (subordinate) factories', but of raising the degree of direct sharing by agricultural workers, as well as by adjoining owners in the profits of exploitation and development of the land, will yield more beneficial long-run results. In this way is there likely to be infused into all participating that degree of pride in performance and love of the land itself which is all too frequently regarded as necessarily characteristic only of the owner farmer himself.

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There is one point on which I think we are unanimous, viz. that the question whether the peasant system of landholding can fulfil the agricultural and social needs of the second half of the twentieth century cannot be answered in the same way for every part of the world. By the definition of Dr. Huni, for instance, Holland has no peasant farmers, because all our farmers wish to get rich, and that is mainly true of western Europe. A comparison of three countries, e.g. Belgium, Denmark, and Holland, shows that they all have a lot of small farms, family farms, but that there are many differences. Belgium does not export agricultural products, whereas Denmark and Holland have to export a considerable part of theirs—Denmark mainly animal-products, Holland eggs, butter, bacon, and many horticultural products, flowers, vegetables, bulbs, fruit, and so on.

The economy of the continental part of west Europe will all depend on the prosperity of England and Germany being sufficiently strong to buy the products which the small holding can produce successfully in competition with the large holdings.

Peasant farming in west Europe has little in common with a self-sufficient economy. On the contrary, the smaller the holding the more dependent it is on the export possibilities. In the second place, there is the question of whether small holdings can be given a reasonable possibility for their existence by being able to buy sufficient cereals and concentrates in the new world, because these feeding-stuffs are necessary for the production of butter, cheese, bacon, and eggs. It can be accepted as certain that bulky products, for instance, cereals, can be produced cheaper on large holdings, as they are able to make far greater use of modern machinery.

The last fifty years, however, have proved that in theory and practice a well-organized class of small holders can produce those animal products I have mentioned and also fruit, vegetables, and flowers in competition with large holders, provided co-operation is applied on a large scale.

The result of the development of so many small holdings has been, however, that several countries of west Europe produced so much butter, cheese, eggs, bacon, and horticultural products, that large surpluses had to be exported to Britain and the industrial parts of Germany. This is the vulnerable spot in the system.

Also there is the difficulty of scarcity of land. The small farmer works with his whole family, but in countries which are already thickly populated and are less suitable for industrialization, difficulties arise as soon as the children are grown up and want to start a holding for themselves. It is then that the lack of land becomes apparent.

In Holland for thirty years already we have seen a growth of population of 1 per cent. annually and in 1946 and 1947 the 'net rate of reproduction' was, according to Kuczynski, even 1·7 per cent. on an average. For those who do not know the significance of this figure, I should explain that a population remaining constant is given by the figure 1 per cent. So we have a disturbingly rapid growth of population and a great population pressure.

The great majority of the Dutch people still think it the most desirable condition, that there should be a large number of independent holders who possess their own land, 'a structure in which the individual farmer combines in himself the role of landowner, capitalist, farm-worker and farm-manager'. The number of these small holdings, however, has become so large in several countries of west Europe that the area of the holding has become too small for an independent existence.

The Dutch Government is considering, therefore, a law by which the creation of new small holdings by the dividing of larger holdings

will be forbidden. Should this be carried, the question arises, where will the grown-up sons of peasants get a start? There is no place (in the near future) in industry and the possibility of emigration to the New World is relatively small.

A nation which makes it impossible for a part of its population to become farmers, although these young people have the capacity and the money to start a small holding, should, in my opinion, be obliged to assure these young farmers a reasonable living in some other profession. And since the authorities are not able to do this I would reject the idea that the government should prohibit anyone who has been educated as a farmer from becoming a farmer.

Likewise, in my opinion, the authorities have no right to prohibit a farm labourer who has saved money to take an independent small-holding. I consider it better that the whole nation should be forced to live poorer than that the drive for more efficient production should be carried so far that the authorities have to deny a part of the people, namely, wage-paid farm labourers and the sons of small farmers, the opportunity of becoming farmers. This is my personal opinion; but, as I have already said, in government circles of the Netherlands people think otherwise.

Quite another question is whether the government should take special measures to support small farmers if it appears that small farmers do not have a reasonable income while the large farmers have. The situation whereby the small farm becomes insufficiently profitable can easily arise in west Europe. Whether special measures ought to be taken to maintain the small holding is not an economic but a social and political matter. The solution cannot be found objectively by economic reasoning.

If, however, there is no place in the non-agrarian professions for these small farmers while emigration on a large scale is as good as hopeless, every government will have to strive to provide a minimum living for these people. They cannot be allowed to perish of want. In the period 1930 to 1940 a part of west Europe was in this situation and it is a condition that can easily return.

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Little remains for me to add to the full discussion which has followed the valuable paper of Professor Medici. I will only deal with two questions of detail.

Professor Medici starts by setting out an antithesis between two types of agriculture. The first type he calls 'peasant agriculture', and the second type he calls 'capitalist'. In the group which he calls pea-

sant agriculture, he places contractual agreements which range from share-cropping to *métayage* and beyond to the small owner-occupied holdings. In the other group he places those types of contractual agreement which go under the name of wage-earning. Starting from there Professor Medici proceeds to describe a specific form which he takes as the nucleus of the peasant type of agriculture, namely, the small owner-occupied holding, and it is with this particular form that he principally deals.

Professor Medici refers to a certain correlation which exists between the creation of small owner-occupied holdings and the density of population and the type of industrial development. These relationships are, of course, worthy of being examined more deeply. Professor Medici does not dwell on the influence which conditions of environment, particularly natural environment, exert on the development of small owner-occupied holdings. Or perhaps I should say, he does not dwell on the influence these conditions have for better or for worse on the development of owner-occupied holdings. It is incontrovertible that in certain countries, especially western Europe, and in certain specific situations, there are forces which tend to break up, or eliminate the small owner-occupied holdings. It is also incontrovertible that it is a good principle which tends to discourage or eliminate small owner-occupied holdings in those environments where the outlook for such development is good. Nevertheless, worded in that way, the question evidently calls for different concrete plans for the different countries.

One has to recognize that, in Italy, at least—the country in which there have been notable developments in small owner-occupied properties—there have been, up to recently, no fundamental and scientific inquiries, such as are necessary to arrive at satisfactory conclusions in modern agricultural economics. Such inquiries are all the more important for us in so far as we are on the eve of the day of great political decisions on this very question. Since this gap in our knowledge has been referred to also by colleagues from other countries who have preceded me, I would suggest that if there is any possibility of doing so, this association should take it upon itself to promote comparative researches on conditions prevailing in different countries.

# AGRICULTURAL CO-OPERATION AND THE MODERN STATE

## FIRST OPENING ADDRESS

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AGRICULTURAL co-operatives in contemporary times range from primitive village societies serving a single simple interest of a local group to large commercial monopolies managed with all the technical, commercial, and financial skills available; they range from single isolated societies to large and even nation-wide federations; they also range from intensely independent organizations to such as are fostered or supported by governments. Contemporary agricultural co-operatives render to their members services associated with livestock breeding, water and electricity supplies, transport, storage, insurance, credit, procurement of production requirements, including their manufacture; sale of farm produce, including its processing or manufacture. The number and variety of extra farm operations with which they are concerned is very wide. But there is the more marked phenomenon of the application of co-operation to intra-farm activities, as in the redistribution of lands, irrigation systems, and in the more recent forms of co-operative production. Perhaps one dividing line between what may be described as the accepted forms of agricultural co-operation and what may be described as 'modern' is that the accepted forms have always dealt with matters lying outside the farm, while the newest forms invade the innermost parts of the farm itself. There are, however, other dividing lines between the conventional and accepted functions of co-operatives, and the modern activities of some co-operatives and pseudo-co-operatives.

Contemporary States, like contemporary co-operatives, exhibit many varieties. Here also some are primitive in their law-making and administration, and relatively simple in their economic structure. Others are more advanced in the nineteenth-century sense of resting on a largely literate citizenship and on representative government in both local and national spheres. Still others are claimed to be even more modern in that they have relinquished or by-passed the form of representative government on an extended franchise and limit their effective franchises to a relatively small group, party, or class.

In some of their features these more modern States embody principles and conditions from which citizens of previous ages struggled to free themselves.

In part, this subject involves a study in the science of Politics rather than in Economics, for any definition of modern States or even any adumbration of their characteristics involves the use of political terms. On its political side a modern State:

(*a*) May rest on a widespread or on a very limited franchise;

(*b*) Its jurisdiction and administration may rest on mental and moral suasion (even though as operated by modern methods of publicity) or on dictatorship of minority or possibly of personal character;

(*c*) Consequently its administration may rest predominantly on voluntary services or predominantly or even entirely on a bureaucratic system;

(*d*) Whatever the basic form in respect of franchise or as regards the ultimate source of authority, all modernist States exhibit growth of bureaucracy in varying degrees from the minimum to the maximum, always approaching the maximum which will currently be accepted by the citizens while they have an element of choice;

(*e*) Consequently one of the principles by which the characteristics of the State must be judged, particularly from the point of view of co-operative organization and effort, is whether the State claims to be the sole source of authority and of political and social creation, or whether it is admitted that the power of social and political creation rests primarily with the people, and that they are the ultimate source of political authority.

Admittedly, this is inadequate as a primary description and analysis, but it must serve for my present purpose. There is, however, an economico-political concept of the modernist State embodied in the term Welfare State. In the Welfare State, the State itself assumes the ultimate responsibility for providing the primary means of subsistence for all its members—or all those who are prepared to obey its laws. It may go farther and attempt to provide for each class or group under its jurisdiction with what is considered to be appropriate economic reward for function or in relation to status, or for function and status combined. Its concrete features are such institutions as unemployment, sickness, and accident insurance, feeding of specially needy or under-privileged groups, subsidies for housing, &c. Little as some groups of farmers like the suggestion, many of the measures for agricultural relief or support are closely akin to

these other features of the Welfare State and spring from the same source.

But, strangely enough, both the concept and the practices of the Welfare State have proved to be somewhat inimical to the movement for voluntary social creation from which most agricultural co-operation has arisen. Welfare States have taken over from friendly societies, voluntary insurance societies, and trade unions functions of insurance. And it has been said that when the State guarantees fixed and adequate prices to farmers there is no need for co-operative organization, or even that such existing organization is redundant. Such States tend either to take from co-operatives some of their opportunities or functions or to impose on co-operatives super-structures of another character.

There is, however, no inevitable connexion between welfare activities of States and restriction of the field of voluntary action, or particularly of the tendency to dissolve or cause redundancy of successful voluntary associations. This tendency to restriction and dissolution largely arises from the growth of bureaucracy and of its power, alongside the developing principles and practices of the Welfare State.

Many students have assumed that the principles and practices of the Welfare State were consistent with economic individualism even when they were not proving compatible with economic and social co-operation of groups. But gradually the Welfare State moves into the sphere of primary economic activity, and it may make the link between the nineteenth-century State of representative government and economic individualism and the most modernist State of auto-cratic government and economic collectivism. Whether any nation can retain a system of extensive franchise, with fully representative government, and establish State socialism, remains to be tested by experience.

Doubtless, however, many people may think of the most modernist State as of a type which exhibits a considerable degree and extent of State socialism, from State ownership and operation of some primary services up to almost complete collectivization, and, strangely enough, there may be more opportunity for agricultural co-operation in the collectivized State than in the transitional stage of State ownership, and it may be more encouraged under the Collective than under the Welfare State. For the full working of Collectivization it may be, and apparently is, necessary to encourage creation of economic and social institutions by the people themselves; that is, to encourage voluntary association; while the obvious tendency of States

developing State ownership is to retain the sole power of creation and to develop such institutions as the Public Corporation and Commission, which exhibit the features of bureaucratic administration in their most extensive and intensive forms. State ownership and operation under specific corporations and commissions is apt to exhibit all the features of private monopoly without any of the checks and balances to which most private monopolies are publicly and continuously exposed.

The general tendency is to define co-operative institutions in juridical terms. In any country in which there is a special co-operative law or code of laws and regulations, a co-operative is as it is defined in such body of law. Many countries have special co-operative codes, and although these exhibit some common features they also exhibit many variations, including some variations in respect of what are often regarded as important principles. In countries which have no special code of co-operative law many associations which are essentially co-operative have attained juridical existence by registering as companies or corporations. And probably in most countries both law and procedure in respect of co-operatives have been affected to some extent by the codes of law relating to companies and corporations.

There has, however, long been a 'philosophy of co-operation' and a set of principles of co-operative organization, and particularly the 'Rochdale principles'. Equally persistent, and on the whole much more important, there has long been a growth of forms of co-operation native to, and fitted to, different economic and social environments. Whatever the juridical position may be, a successful co-operative is a living and growing institution, partly adapting itself and its members to an environment and partly adapting the environment to its own and its members' requirements. The living, active organizations seem to have broken all the principles except the simple essential of enabling their members to pursue mutual interests in obtaining service at cost, by mutual action, in mutual confidence.

Perhaps the most comprehensive set of characteristics, embodying the principles commonly recognized as appropriate to an agricultural co-operative which is, or is to be, a corporate body, is as follows:

1. A co-operative is a union of persons to supply themselves with goods and services at cost.
2. Shares are identified by persons; the member-shareholder must be admitted to membership and transfers must be approved by the body of members or their representatives.
3. There is no limit to the number of persons who may participate

in the business within its range of operations, that is, the number of shares is not limited.

4. Every shareholder must be a member; thus the shares are not limited in number, and cannot exceed par value.
5. A member has one vote and no more, regardless of the number of shares he may hold.
6. Trading or operating surplus belongs to the members, i.e. the suppliers or customers.
7. Surplus is divided amongst the members in proportion to the amount of business each does with the society, except where a limited interest on capital is paid.
8. Fixed minimum rate of interest on capital (or no payment of interest on capital) subscribed by members or left by them in the society from their shares of surplus.
9. The selling price or the service charge is an arbitrary figure containing a margin of business safety above cost, and the surplus constitutes an excess charge, or in the case of a marketing society, an under-payment.
10. The business is organized and conducted as a mutual service for the benefit of the members and not for the benefit of the co-operative as a legal entity.

There are other shorter statements, such as that a co-operative is a union of persons and not of capital; being a union of persons, ultimate control should be on the basis of one man one rate; its object is to supply service at cost; such capital as is necessary for service of the object should be remunerated at a fixed, or a fixed maximum, rate; and that any surplus accruing from transactions should be distributed on the basis of patronage, that is, the quantity of transactions of each member with the society.

Several of these are political or juridical rather than economic principles. These or similar principles are necessary to corporate recognition and existence; but they are not necessary to natural existence or effective operation. Every one has been broken or ignored consistently, with economic success. It is therefore necessary to offer the elements of an economic theory of agricultural co-operation.

The fundamental conditions of co-operative action are the existence of common and mutual interests; recognition of the need or of the economic advantage of mutual action; agreement on the principles of organization and on the main principles of operation for and in mutual action. There are, however, two entirely distinct classes of agricultural co-operatives: (1) those which deal with the interests of

the farm business outside the farm boundaries; (2) those which constitute the essential structure of the farm business itself. Different principles are necessary in the two cases.

The traditional and universally accepted form of agricultural co-operatives, dealing with external relations, is not a union of persons. It is a union of a specific section (such as insurance, or credit, or marketing, or supply procurement) of a number of farm businesses. The farmers are members representing their farm businesses. When the farmer ceases to farm he ceases membership. It is, therefore, unnecessary that voting should be on the principle of 'one man one vote', for voting according to proportionate interests (patronage basis) is entirely consistent with complete mutuality. It is not always necessary that the group entity which we call the society should control an operating fund which is erroneously called capital, but when it does it will do so solely for the purpose of pursuing the object of the group; the operative fund is always a servant of the object, and supply is not an investment. Such operating fund as is necessary may be obtained by borrowing, by subscriptions of members to shares or otherwise, or by deductions from financial surpluses of current operations. When interest is provided it is paid as a primary cost on externally borrowed capital, and more or less at the same rate as a secondary cost when paid to members. When operative capital is obtained by borrowing on the security of the credit of the individual and (or) combined farm businesses, or in the form of reserves from previous surpluses, each member contributes in proportion to patronage. It is better that direct contributions from member-businesses should be made on the same principle. The object of the group is to obtain goods or services at cost. The price or the service charge may be fixed at cost where this is firmly and reliably known, or at such higher level as the members of the group may agree. Any net margin between cost and price or service charge is not profit, it is a surplus mutually created for business efficiency, security, or expediency, and it is retainable in the business or distributable to members on the basis of patronage. The only principle here which is modifiable is that of voting, and if a group fully agrees to accept that of one-member-one-business vote, the business of the group may be efficiently conducted on that basis. The principle of mutuality is not only implicit but inescapable throughout this statement and it is consistent with either limited or unlimited liability of member-businesses.

As regards membership, the basis is the farm and its business, and the farmer is treated as the representative. The interests of the farm

business may be, quite commonly are, fractionated, e.g. as insurance, credit, water-supply or control, procurement of supplies, and marketing; but in each case the farmer is the representative, and when the farm ceases to hold the specific interest its membership should lapse. Throughout this statement the emphasis is on the group formed by the member-businesses and on mutual protection or service.

The modern State has always fostered the idea of the corporate character of the co-operative group, and that of the identity and separateness of the resulting society, mainly for expediency and largely in relation to taxation. Taxation in the modern and particularly in the Welfare State tends to be heavy. Governments have difficulty in locating sufficient taxable revenues. Consequently it is in their interest to treat the operating surpluses of co-operatives as profit and as taxable more or less under the same conditions as the profits of corporations or companies. Co-operators and their advisers have been anxious to obtain the cover of the State for their groups as corporate or semi-corporate bodies, and in some States they are now paying heavily in taxation for this recognition and cover. Any impartial student must admit that widespread development of non-corporate co-operatives does seriously handicap the taxing activities of the State. While the total of business and ultimate personal incomes, and therefore the total of taxable income, is increased by co-operative activities, there is much more difficulty in collecting a given amount of tax revenue from a large number of farmers than from a smaller number of co-operative societies representing their businesses. But eventually the taxes are taken out of the farm businesses. The real remedy for this situation of the State is more and more co-operation until the co-operative commonwealth covers the economic structure of the nation, and the sphere of activity and the revenue needs of the State are reduced to the barest necessary minimum.

Another condition with which both co-operatives and modern States have been concerned is the application of compulsory regulation to certain aspects of farm business. For half a century or more certain States have worked with co-operative organizations of their farms to secure the effective application of necessary regulations. At some stages this is co-operation between the co-operative and the State, and at others it becomes imposition of regulation or even imposition of a super-structure by the State. Here co-operators and their economic and legal advisers have been divided, but the general tendency up to 1930 was to emphasize the voluntary character of co-operative organization and activities. By the definition used above,

organization and activities are voluntary in origin; they rest on the existence of mutual interests and on the recognition of need or advantage of mutual action. At this stage they rest on individual choices; but after a certain stage has been reached it may be possible for one individual or a minority seriously to reduce or even to destroy the advantage of mutual activity on the part of the majority. At this stage the application of compulsion to an individual or a minority is wholly consistent with and is, indeed, required by the principle of mutuality. The principle that one person or a small minority having in part a common interest with a majority shall not be free to damage the greater interest of the majority for the lesser advantage of the individual or the minority is one which has long been socially and politically accepted. A few groups of agricultural co-operators have been fortunate in that they have been able to apply compulsion to individuals or even minorities without the assistance of the State. More frequently, co-operators have sought the assistance and the sanction of the State in the application of economically necessary or desirable compulsion. At this stage the State, or, more realistically, the bureaucratic representatives of the State, become jealous, and the theory is advanced that no group other than the State should have a right to apply and administer compulsion. This theory, of course, is purely one of expediency in the particular case, for in all modern States certain internal groups apply forms and degrees of compulsion not only to voluntary members but to all persons or businesses which exhibit the common interest.

No one should lightly apply such comparisons as co-ordination versus subordination, co-ordination with subordination, or subordination for co-ordination to the various degrees and forms of interaction between the State and agricultural co-operatives, or between co-operative groups and their members, for there is in fact very little co-ordination without some degree of subordination at any stage of co-operative development. The justification of both is that they serve the common and mutual interest of all the members of the group.

But here, as in practically every case of group action or State action, the problem of securing progress while maintaining regulation and security is apt to arise. The common and heartily accepted theory of all co-operation in the external activities of farm business is that voluntary co-operation strengthens the individual farm unit and tends to preserve it. Sometimes the theory has gone farther, to the claim that co-operation strengthens and intensifies the essential individualism of the farmer and his farm. There may have been cases

in which this theory has been justified, but in the main it is mere self-deception—the rosy colour or the sweet wash which makes the pill attractive. When the co-operative begins to tell the member what he shall produce, how he shall produce it, what or when he may market in quantity or quality, the member becomes subordinate to his own group; he sacrifices the illusion of independence for more material or reliable satisfactions. It is largely through well-informed actions of this kind that the co-operative group provides security and combines security with progress. States may well collaborate with co-operatives in scientific, technical, and commercial research for the maintenance of security and continuity of progress in the co-operating groups, for in this way the interests of the general community are served.

States have been concerned with the internal activities of societies, such as those of obtaining or maintaining sufficient operating funds, and those of 'pooling' proceeds of sales on behalf of members. Co-operatives of many countries have been ill advised in following corporation or company practice and describing their operating funds as capital. In modern economic, commercial, and accounting terminology 'capital' implies an earning factor, and an investment of an earning character. But the provision of an operating fund for a co-operative is required for the service of its object; it is not primarily an investment. This is not mere theory, for the bulk of the operating funds of agricultural co-operatives the world over have been taken from operating surpluses, and on these 'reserves' or accumulations no interest is paid. Members making sacrifices are rewarded in the resulting efficiency and economy of operations in the service of their interest. However, if States are successful in attaching the description of capital to the operating funds of co-operatives, they strengthen their taxation claims.

One of the common principles of co-operative organization is that shares or membership claims are not freely transferable; they are not saleable; they are only withdrawable or transferable with the consent of the members or their representative committee. But the fact of heavy accumulations, and in some cases of designed under-payment on produce sales to create operating funds through current services, has sometimes caused division of interest between passing members and current and coming members. This is one of the cases of confusing the membership, which is essentially that of the farm and its business, with a personal membership of the farmer himself. Nevertheless, States have been concerned with methods of dealing with this internal problem of the provision of adequate operating funds and

their treatment, partly because of the influence of methods on general financial conditions. But the 'revolving fund' method of securing operating funds, and the form of non-stock (non-share) organization, are entirely consistent with the principle of mutuality, and sometimes necessary thereto.

As regards pooling, the simplest statement is that co-operatives and co-operators have always pooled expenses or costs (and surpluses) directly, or almost directly, in proportion to patronage—in proportion to the service rendered to the member. It is a logical step, and one entirely consistent with the principle of mutuality, to proceed to pooling of sale revenues—an appropriate, equitable principle. There are intricacies, if not difficulties, in determining equitable principles of pooling. Nevertheless, pooling has contributed to the security and even to the remuneration and welfare of members. It is where a system or systems of pooling are combined with some forms or degrees of compulsion that States are tempted, or even asked, to play a part. (But this subject is of too local and intricate a character for discussion at this stage.)

There is, however, the important subject of fixed prices and the distribution of surplus arising from the supply of farm requirements, and that of the necessity of co-operative organization when prices of farm produce are fixed and guaranteed. It has been claimed that when final prices of such commodities as fertilizers are fixed, the distribution of co-operative surplus on their handling is a breach of regulations. This claim has been defeated in Great Britain, but there are still private monopolies or cartels which refuse to sell to co-operatives because of their distribution of surplus. The real remedy for this is more co-operation and more cohesion amongst farmers on behalf of their business. Suggestions have been made that when prices for farm products are guaranteed there is no necessity for co-operative organization and activity. These are due either to a deliberate failure to understand the contribution of co-operatives to economy or efficiency in the handling of farm requirements or products, or to understand that economy and efficiency are never more necessary than when guaranteed prices are required. But sometimes a greater fallacy and danger occurs: namely, that when farm prices are guaranteed or fixed, every private interest concerned in handling produce should be guaranteed not only margins but trade and revenue. This way lies a rigid economic system leading to social decadence.

For some purposes and in some connexions States have welcomed and fostered agricultural co-operatives of the external relations type.

At the present time the Governments of most of the British Colonial Territories and Dependencies are actively attempting to encourage and assist co-operative development, and in some territories the movement has reached extensive scales and advanced stages. In all cases of fostering or encouraging of primary co-operative organizations by governments the essential problems are those of education, namely, adult education and the creation or development of leaders, and the creation of confidence between promoters and potential members, between members on one side and leaders and officials on the other, and, fundamentally, of confidence between member and member and fully mutual conviction of the necessity or advantage of mutual action. There are other problems, like the training and supply of staff, supply of initial operating funds, &c. But the aim of promoters must be that of offering themselves and their contributions, while the principles of voluntary activities are followed and developed, until the co-operatives ask again for State guidance or support.

There are many other aspects of co-operation in respect of the external relations and operations of farm businesses which require treatment, but I must leave these to other members of the Conference. For I must turn to a brief treatment of the second type of agricultural co-operative—that dealing directly with the internal structure of the farm business. A number of States, concerned with the problem of scattered holdings, are fostering co-operatives to arrange and conduct redistribution of scattered parcels. The principles involved are mutual agreement of certain proportions of people representing certain proportions of land, and the subsequent compulsion of the minority by the State. Again, where irrigation is practicable and advantageous, there is sometimes tri-partite organization: the State is responsible for the main works; a co-operative covering *all* of a definite continuous area pays for the water and distributes it, being responsible for some main channels; the individual is responsible for channels and distribution affecting solely his own property. There are other forms of organization for irrigation in which co-operatives are concerned, but it must be obvious that these forms of land co-operative involve the closest possible degree of mutuality, and a close discipline achieved either through co-ordination and voluntary subordination or through compulsion. In these forms the farm business rather than the personal farmer is still the member unit.

But there are other forms of agricultural co-operation in which the farmer himself constitutes the member unit, and such operating funds as he may contribute go in with him. Here some students fail to

distinguish between the co-operative and the collective type of organization. But in Palestine, in Russia, in Yugoslavia, there are types which are appropriately described as co-operative. In Russia and Yugoslavia the members contribute land and work-stock; they may retain a small homestead area for individual production, but otherwise they produce within the co-operative group and consume within the individual family group. The co-operative builds up land and equipment for the use of the group. If a member wishes to leave he cannot segregate his land or his operating fund, but he is promised an equivalent area of land elsewhere. In Palestine, owing to special circumstances, the land may be supplied by an external party or by members, but otherwise conditions are similar.

In Palestine and Mexico there are forms which are properly described as collective, in which there is both production and consumption within the group, and the economic individuality of the member is submerged in the group. (No complete individuality or personality is ever completely submerged in any group without consent.) These types are not claimed as co-operative.

It is, however, necessary to add that widespread development of true co-operative organization and activities is quite consistent with widespread socialization or collectivization. 'Rural co-operation can be at one and the same time an essential feature of a planned economy and the main expression of functional democracy in the countryside.' 'The co-existence on the one hand of a multitude of voluntary co-operative organizations and national industries and State trading on the other, have proved in the Soviet Union to be a working proposition.'

Whatever the primary sentiments of co-operators may be they need to approach these most recent forms of organization in a spirit of communication, rather than of ex-communication. We ought to have learned by now that the economic and social world is not ruled by the principle, 'That which hath been is that which shall be'. Invention and innovation have expanded or contracted the areas, and changed the forms of activity of the individual, the voluntary association, and the State, and they have brought into being institutions which do not fall into any of these categories.

Co-operatives must never forget that fruitful and stable social progress is built on the dual foundations of changes in institutions and in the make-up and outlook of human beings. When the practice of co-operation touches only a small segment of the life of the co-operator (as solely in the use of credit) his attitudes and habits may be and frequently are little affected. The broader and deeper the

segment of economic activities and of life concerned in the practice of co-operation, the greater will be its influence on his attitudes and habits. 'It is not enough', said George Russell, 'to organize farmers in a district for one purpose only—in a credit society, a dairy society, a fruit society, a bacon factory, or a co-operative store. All these may be and must be beginnings; but if they do not develop and absorb all rural business into their organization they will have little effect or character . . . The specialized society only develops economic efficiency. The evolution of humanity beyond its present level depends absolutely on its power to unite and create true social organisms.' It is my mission to suggest to this Conference that the only option for those who fear collectivization is that of starting immediately to build the co-operative commonwealth.

## SECOND OPENING ADDRESS

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DEALING in general with the relations of co-operation to the modern State, J. P. Warbasse,[1] a distinguished American author, writes that, as co-operative business expands, the functions of the State, together with predominance of political power, grow less. Indeed, if we draw a comparison of the evolution of co-operation and that of the State during the last fifty years we find no confirmation of this opinion. On the contrary we convince ourselves that the opposite is probably true. Development of economic co-operative enterprises has occurred simultaneously with the growth of State intervention into economic activities. Consequently it may be inferred that either no correlation exists between the two phenomena, or it operates in a sense opposite to what Warbasse has stated. We feel, however, that an analysis of the relations of the co-operative movement to the modern State requires an adequate premiss on the nature and extension of co-operative enterprises.

Co-operation as a voluntary business undertaking was born and rose to a place of importance only in modern market economy systems. It has been deeply discussed whether or not a co-operative enterprise as such possesses economic principles of its own—principles capable of differentiating the co-operative form of business from other individual or associated private enterprises.

[1] J. .P Warbasse, *Co-operative Democracy*, Harper & Brothers, New York, 1947.

Investigation into the fundamental principles of co-operation was based on observation of co-operative enterprises in their concrete manifestations, and many worthy economists such as Cairnes, Gide, Wollemborg, Pantaleoni, Rabbeno, Lorenzoni, Valenti, Gobbi, and others contributed to the necessary objective analyses. The contribution of Italian economic thought to this problem is highly notable.

Pantaleoni[1] asserts that co-operative enterprises have no autonomous principle; and, supposing the existence of one, diverging from the law of supply and demand, he demonstrates that no state of economic equilibrium would follow. Furthermore, if everything was produced and sold through co-operatives, this would lead to the same values as free competition. To Cairnes co-operation represents the only possible way for the working class to share the enjoyment of the benefits and honours of civil progress. Gide attaches less importance to the economic advantages of co-operation and views in the movement the prospects of a transformation of the present economic order and the supreme hope of those who believe there is a social problem to solve and a social revolution to avoid.

From a logical point of view little can be opposed to Pantaleoni's strong arguments. Reasoning from the fundamental teachings of economic theory he comes to the conclusion that egoism is the creative and the vital force in co-operation. Like other forms of economic enterprises, co-operatives are a manifestation of self-interest. This is confirmed by the fact that co-operatives have never set aside the established laws of economics for any permanent period.

Nevertheless, we cannot ignore that the hypothesis assumed by the theory of economic equilibrium very seldom occurs on the market in a perfect way. Also, as Wagner[2] states, man's economic actions are influenced not only by egoistic motives but often also by sentimental and ethical ones. We therefore agree with Pantaleoni that co-operative associations are voluntary and not enforced business organizations, that they exist just so long as they please their members, and that they are economic and not charitable organizations. But we differ in opinion from Pantaleoni when he says that their vital forces are strictly hedonistic.

Following the ideas of Gobbi, Serpieri[3] notes that speaking of co-operative business we generally think of something opposite to a

[1] M. Pantaleoni, Esame critico dei principi teorici della cooperazione, in *Erotemi di economia*, Laterza, Bari, 1925.

[2] Adolf Wagner, *Die wirtschaftliche Natur des Menschen: Grundlegung*, 1882.

[3] Arrigo Serpieri, *L'Agricoltura nella economia della Nazione*, Barbèra, Firenze, 1940.

capitalistic enterprise. The aim of the latter in combining productive agents is to gain the maximum difference between monetary receipts and expenses or, in other words, the maximum reward for use of capital, therefore a maximum profit. This is done by paying suppliers and labourers the lowest possible price and selling to buyers at the highest price obtainable. The enterpriser therefore speculates on the other participants in production. On the other hand, the aim of co-operative enterprises, by limiting interest on capital, is to buy goods and services at the lowest possible price for members who are buyers, and sell at the highest price obtainable if their members are suppliers or labourers. This purpose is achievable with economic advantage to the member patrons every time competition is not as perfect as that hypothesized by the theory of economic equilibrium.

Considering only economic motives, co-operative enterprises act against speculation of private enterprisers whose purpose, individually or associated, is to gain a profit. They operate in an anti-monopolistic way and are instrumental in the reactivation of competition. The above concepts do not contrast with those of Pantaleoni inasmuch as they do not deny that the same results could be achieved without co-operative enterprises if the hypothesis of perfect competition were true. They positively state, however, that the hedonistic force which influences man's economic actions becomes socialized in co-operation. This because the co-operator believes that the best way to help himself is to help others at the same time.

Also, in a purely economic sense, co-operative enterprises often make it possible to reach the optimum size in the combination of productive agents. This is particularly important in agriculture, where the small family farm unit is prevalent.

But co-operation is not explained by purely economic factors. It is a form of organization characterized also by ethical values which act as a uniting force and strengthen the economic bonds. Co-operative spirit is nourished by high ideals such as trustfulness, mutual dependence, and endeavour for moral elevation. Many co-operatives were formed, thanks to the wish to spread such ideals. It may be true that co-operatives seldom live if they do not succeed in obtaining economic advantages for their members, but it is also true that where they are economically successful they accomplish high educational work and are socially beneficial.

The co-operative movement has recently been further analysed to define the basic concepts which determine the sphere of useful application of collective action. Such concepts are not autonomous economic principles as signified by Pantaleoni. They are generaliza-

tions of elements indispensable to this particular type of enterprise, derived from wide and useful application and subjected to a process of logical reasoning. In this latter analysis of the theory of the co-operative movement we find notable contributions by American writers.[1] The above generalizations are usually presented as the principles of co-operative organizations, although it is admitted that others may be discovered and that the established ones may be modified or discarded as time passes, owing to changes in economic, social, and political conditions.

In 1930, at the International Co-operative Congress in Vienna, it was decided that an International Committee of experts should be requested to investigate the leading principles of consumer co-operation. It seems that the determining motives of this decision were to be found in the disconcerting deviations from traditional practices reported in some countries. The Committee held meetings in seven different European cities to examine questionnaire reports from all parts of the world, and in 1934 presented to the International Congress, meeting in London, a résumé of its findings.

The seven following principles were recognized as basic ones:

1. Open membership.
2. Democratic control.
3. Dividend on purchase.
4. Limited interest on capital.
5. Political and religious neutrality.
6. Cash trading.
7. Promotion of education.

Unlimited membership is justified in consumer co-operatives because the more members there are the greater will be the savings in wholesale purchasing and the lower the cost per unit of retailing. There is much uniformity in the purchasing possibilities of members in consumer co-operatives, whereas large variations may be found in the participation of members in producers' sales and service associations. Membership contracts are not deemed essential and members are free to patronize the co-operatives of their own free will. The initial capital subscription should be as small as possible, and sometimes provisions are made whereby non-members may become members by patronizing the co-operative stores and letting dividends accrue until they reach the sum necessary to buy a share of stock. It is understood that the open membership rule seldom applies to producer co-operatives.

[1] H. H. Bakken and M. A. Schaars, *The Economics of Cooperative Marketing*, McGraw-Hill, New York, 1937.

Democratic control is probably the most universally recognized principle of co-operation—the one to which no exceptions are approved. When co-operatives federate, centralized administration may be adopted for purposes of efficiency, but decentralized democratic control must remain the co-operative rule. Voting rights are therefore equally distributed on the basis of one vote to each member. Thus concentration of power in the hands of a few members may be avoided and the primary object of co-operatives remains services at cost and not profit.

However, it cannot be ignored that in many producer co-operatives there may be wide variations in the contribution of members to the success of the organization. This may justify the desire to be allowed proportional voting power. Indeed, many marketing co-operatives in the United States, notwithstanding opposition on the part of orthodox co-operators, allow additional votes to members based on amount of stock held or on the volume of product delivered. Nevertheless, legislation on co-operatives in three-fourths of the States provides that no member shall be entitled to more than one vote regardless of patronage or amount of stock owned. In those States where additional votes are allowed limits are placed on the number of votes which may be given to any one member. Approximately 86 per cent. of more than 10,000 marketing and purchasing associations in the United States allow only one vote to each member, and the remaining 14 per cent. allow additional votes in various forms.[1]

Distribution of earnings and savings to members on the part of co-operatives in proportion to patronage is a matter of equity. If it were possible to figure exactly all costs in advance, in theory it would be possible to regulate each transaction between members and co-operatives in such a way as to avoid savings and earnings. As this is not possible they must be allowed to accrue until they can be conveniently and fairly distributed according to patronage. This is also essential to meet unforeseen obligations and sets aside funds for cultural and educational activities.

Furthermore, it makes possible an interesting method of financing co-operative organizations, consisting in distribution of patronage dividends in the form of interest-bearing certificates of indebtedness instead of by cash. The certificates show that the member has a certain amount of accumulated savings credited to his name. When sufficient capital has been built up the earliest certificates are redeemed in cash, thus forming a revolving fund by which members

[1] Ward W. Fetrow. *The principles of agricultural cooperation*, Circ. E 24, F.C.A. Washington 25, D.C. 1945.

share in the financing of their association in direct proportion to the use they make of it.

The limitation of interest on capital is another fundamental characteristic of co-operative enterprises. Like all other economic enterprises, co-operatives need capital for physical facilities and operations, therefore permanent and working capital. It is provided as usual by sale of common stock and by borrowing from banks. But since co-operatives are non-profit organizations the use of capital invested by members is paid for at the 'going rate' exactly the same as wages, salaries, and rent.

Co-operators recognize private ownership of property and the force of capital in production. Nevertheless, they state that as a force it can be directed for good or evil. Under the *laissez-faire* system of economy an excessive concentration of capital may promote its use as a means of exploitation of those who find themselves in a weak bargaining position on the market. In such conditions labour is brought to serve capital, and labourers become the object instead of the subject of economy.

By means of statutory limitation of returns on capital, co-operative enterprises not only achieve their fundamental aims of getting goods and services at cost, but they also contribute to direct the use of capital to a higher purpose; that is, to the benefit of all members of society.

Political and religious neutrality is a direct consequence of open membership. Members join a co-operative prevalently for an economic need and if admission were discriminated according to political or religious faith, serious limitations would face development of co-operation. Worse still, if when a co-operative is formed it were to sponsor any particular faith. Dividing factors would then easily overcome the uniting force of mutual economic purposes.

Co-operatives in most countries claim adherence to the rule of political and religious neutrality and few people doubt its usefulness. Still, in many other countries like England, Finland, Russia, Italy, and Austria the rule appears to be the opposite one and truly neutral co-operatives are more like exceptions. In those countries often the desire to spread some religious or political faith has been the determining factor in the forming of many co-operative organizations. On the other hand, in some agricultural co-operatives, particularly workers' co-operatives that pool the labour of their members for joint operation of farms, a common political or religious faith has often proved to be an indispensable element as a uniting force. Economic motives alone seldom promote this particular type of agricultural co-operative and still less success.

Cash trading is another co-operative rule. Its importance is obvious for the better economic results owing to lower costs. In consumer co-operatives it also serves to encourage members not to be improvident by spending more than their incomes. But it is not always easy for a co-operative to adhere to a cash policy as competitors may attract their patrons by granting credit. It is generally advisable to meet the credit necessities of co-operative members by promoting the institution of parallel co-operative credit organizations.

Promotion of education has been an extremely important and beneficial social factor since the very beginning of the co-operative movement. It was first intended to foster co-operative spirit in order to consolidate and promote the development of the co-operative method. As the movement grew in importance the larger funds set aside made it possible to intensify cultural and educational initiatives to a point that in many countries co-operation is now a powerful instrument of social elevation and civil progress.

In their interesting book on the economics of co-operative marketing of agricultural products, Bakken and Schaars[1] adequately examine our so-called principles in relation to agricultural sales co-operatives and then add two more. Precisely as co-operation spreads, the necessity grows of functional and commodity specialization and the control or ownership of marketing facilities and institutions.

The same authors also mention a very interesting fact which seems to be becoming general in the United States, the apparent willingness of American co-operators in some quarters to submit themselves voluntarily to more control and direction than ever before. In this trend they see the shadowy outline of a principle which seems to be taking shape in the idea of economic control or a planned economy.

We may now ask if, in agriculture, co-operation is in any way differentiated from that in the other sectors of economic activities. In general, it may be noted that as co-operation strengthens the bargaining position of members on the market it was quite natural that it should develop particularly among farmers whose bargaining position is constitutionally weak. In particular, we may say that while in industry and commerce the enlargement of economic enterprises, favoured by considerations of costs and new technical developments, was made possible by forming bigger capitalistic organizations with little, or only tolerable consequence, on production in relation to hired labour, the story in agriculture is quite different. The characteristics of agricultural work are such that from the economic viewpoint co-interested labour is preferable to hired labour. This explains

[1] Op. cit.

why family-size farm units still prevail in agriculture. It also explains why co-operation, by making possible the attainment of the optimum size enterprise in some phases of production, developed particularly in agriculture as a parallel phenomenon to concentration of enterprises in industry and commerce. It may be added that agriculture is not only an economic activity; it is a way of life, different from urban life and as such makes people more responsive to the ideals of co-operation.

A glance at the extent and nature of co-operative activities in the various parts of the world points out that consumer co-operation largely prevails in food-importing countries like England and Germany, while producer and particularly marketing co-operation prevails in food-exporting countries, such as the United States, Canada, Australia, &c. Environmental influences and experience also affect co-operation. Peoples of northern Europe, who have long been accustomed to dependence upon each other against unfavourable natural conditions, more easily undertake collective action than peoples in southern climates where life is much easier.

On the historical development of the co-operative movement we need only emphasize how much it was influenced by the contribution of thought by men like Sismondi, Claude Henri de Saint Simon, Robert Owen, Charles Fourier, Louis Blanc, and many others. Such a contribution goes closely together with the accentuation of economic, political, and social evolution in the same period characterized by great scientific discoveries and technical novelties. The effects of these rapid changes probably inspired the famous Rochdale 'Equitable Pioneers' to form in 1844 what is recorded as the first consumer co-operative. A growing movement followed, differentiating the organizations into the three types of producer, credit, and consumer associations, until we reach the present-day powerful co-operative formations in all parts of the world.

An idea of the extension of co-operation may be had from a few figures. According to data published by the International Labour Office[1] more than 810,000 co-operative organizations were in existence in 1937 totalling approximately 143 million members. Agricultural co-operatives amounted to 83 per cent. of the total number. However, 54·5 per cent. of the members were in urban and industrial co-operatives and of those 75 per cent. in consumer co-operatives. Rural co-operatives included 45 per cent. of total membership. According to geographical distribution approximately

[1] *Le Mouvement coopératif et les problèmes actuels*, Bureau International du Travail, Montreal, 1945.

37 per cent. of the 810,000 co-operatives were found in Europe, 35 per cent. in the U.S.S.R., 20 per cent. in Asia, and 6 per cent. in America.

In the United States alone in 1944 there were more than 19,000 farmers' co-operatives of which approximately 10,000 were of the marketing type. They had a total membership of 3½ million farmers and their volume of business exceeded 5 billion dollars. During the last war these farmers' organizations supplied about one-third of the agricultural products shipped overseas notwithstanding that more than 80 per cent. of the total agricultural production in the United States is still sold through non-co-operative agencies. The highest percentage of a country's total agricultural production marketed by farmers' co-operatives is found in Denmark and even there it does not reach 50 per cent.

Among farmers' co-operatives we find the purchasing type of association more or less generally developed in many countries, while the sales associations largely prevail in food-exporting countries. Co-operative marketing has been successfully applied in some part of the world to almost every kind of agricultural product. Successful marketing co-operatives are generally organized on a single-commodity basis and are financed by co-operative agricultural credit associations.

A recent inquiry made by a committee of experts in the United States enumerates among its findings a very interesting trend in farmers' co-operatives. It appears that purchasing co-operatives no longer confine their activities to farm supplies but aim at extending their services to marketing their members' farm products. Likewise, farmers' sales organizations are taking an interest in their members' needs in farm supplies.

Practically every nation in the world has nowadays special legislation on co-operation, and public policy is in favour of further development of agricultural co-operation.

The modern State is characterized by increasing intervention into economic activities. This is the result of the deficiencies revealed by the capitalist system and it may be stated that there is to-day no economic activity which is not either controlled or run by a State in some part of the world.

Critics of capitalism have sustained Socialist propaganda by advocating abolition of private ownership of property. Also, in countries where this aim has not been reached, the effects of such propaganda are very important. Legislative bodies have been induced to promote laws that in various ways direct and control economic activities. Such laws can hardly be disapproved of when one considers that during the economic disorder of the last thirty or forty years

they have made possible many adjustments between production and consumption requirements that under the *laissez-faire* system of economy would have implied long waiting and suffering, particularly for the working classes.

In its evolution which results in the increase of its economic functions the State could not possibly ignore the co-operative movement. Enthusiasts of co-operation accuse liberal States of defending privileges in opposition to the co-operative aim of an equitable distribution of wealth. They also like to point out that the initial attitude of governments towards the co-operative movement was characterized either by indifference or unfriendliness. A case often cited is that of Bismarck, who is said to have opposed by all means Schulze-Delitzsch and Raiffeisen in their successful movement of co-operative credit organizations. This he did to the point of supporting the adverse Socialist propaganda of Lasalle who feared lower wages to labourers would follow cost reductions resulting from co-operative economic activities.

Indeed, the maximum development of co-operation took place when modern States provided co-operative enabling legislation and favoured it by positive endorsement and financial assistance. Loans on favourable terms were freely given in many countries, especially to producer co-operatives. Agricultural marketing co-operatives largely benefited from these advantages.

Since the very beginning of the movement many people have held the opinion that agricultural marketing co-operatives especially are of a quasi-public character and require paternalistic care on the part of the State. This explains why even in liberal and democratic States like the United States of America co-operative laws provide for supervision sometimes in the form of simple liaison with governmental technical agencies, sometimes by allowing a public representative to sit with the directorate of large-scale associations to safeguard the public interest.

In 1926 a Division of Co-operative Marketing was created in the United States Department of Agriculture, which in a relatively short time has accomplished some extremely useful and constructive work. The Division acquires, analyses, and disseminates economic, statistical, and historical information on co-operative associations in the United States and abroad; it studies all phases of co-operation and illustrates them in valuable publications. When requested, it assists groups of farmers desirous of forming co-operatives. It supplies existing co-operatives with information on crop prospects, prices, and market movements. It promotes knowledge of co-operative

principles and practices to foster development of co-operation in the country. The Division is to-day, indeed, the national research and extension agency in agricultural co-operation.

Relations between agricultural co-operatives and the State go even farther than this in countries like the United States. Various attempts to control surplus production by pro-rate schemes, regulating the flow of commodities to market and worked out by the growers themselves, had failed miserably. In States such as California where this need is particularly felt to restrict fruit-production areas under intensive cultivation, a strong drive was made for compulsory co-operation owing to these failures. It resulted in the enactment of a series of laws designed to control the production and marketing of agricultural commodities in intra-state commerce. The acts are administered by the State director of agriculture or by special committees and provide that growers may control shipments and share markets if two-thirds of the producers choose to invoke the provisions of the law. Since 1934 the pro-rate plan has been applied with substantial gains to producers.

An interesting case of agricultural co-operatives organized by the State and, in a sense, forced down from above upon individual producers in a country is found in Ireland. Here, an excess in the number of privately owned creameries had produced a crisis in the industry. Inspired by prominent men in the co-operative movement, the Government therefore enacted a special law by which all plants were bought over, some closed, and the others turned over to the farmers and their co-operative organizations. The entire creamery system was placed by the State on a co-operative basis. Other examples of important State intervention in democratic countries are found in Australia and South Africa where compulsory pooling of agricultural products by co-operative organizations can be established if the majority of producers vote in its favour. This has been done for wheat and eggs in Australia and tobacco in South Africa with economic advantage to producers.

We will now briefly indicate the vicissitudes of agricultural co-operation in countries which still have or have had long experience of authoritative government.

Russia in 1918 had a vast consumer, credit, and producer co-operative organization. The latter type had developed particularly among the peasantry. The rapid growth of the movement took place during the First World War. It is worth considering that the Moscow People's Bank had set aside 400,000 roubles for cultural and educational activities and that a co-operative university was opened in

Moscow in 1918. In the same year 65 per cent. of the food of central Russia was distributed through the greatest voluntary co-operative movement in the world.

When the Bolshevik Government came to power it began taking control of the co-operatives. In 1919 it was decreed that all consumer commodities be distributed through co-operative stores until in 1920 all distributing agencies were confiscated by the State without compensation. The State administration was later judged unsatisfactory so that in 1921 the autonomy of the co-operative societies was nominally re-established. In various ways they remained subject to State control. A new period of expansion followed until in 1935 the State again confiscated and nationalized urban co-operative stores, leaving the rural ones autonomous as before. The latter continued to expand, and in 1937 had reached over 280,000 co-operative associations with approximately 60 million members.

It is the opinion of many writers that co-operation cannot exist together with Communism. Therefore if in many countries where the Communists are in power a strictly State-controlled and modified co-operation still survives, for the benefit of the members who want it, it is because in those countries Communism has not yet really been attained.

As soon as the governments consider the right moment has arrived they will destroy the co-operatives now tolerated owing to their popularity.

In the other two countries which experimented with a régime of authoritative governments, Italy and Germany, the co-operative movement obviously could not escape control on the part of the State. Many inexact things have been written abroad on this subject. As far as Italy is concerned, some initial persecution of members of adverse political parties was confused with pre-conceived hostility against the co-operative movement. On the contrary, until 1935 existing co-operatives and therefore also agricultural co-operative associations enjoyed in Italy full freedom of initiative and were administered largely and democratically by their members. This is confirmed by the fact that the movement continued to expand. In this phase voluntary co-operation was judged favourably and State intervention was limited to promoting efficient co-ordination of existing organizations. The declared unity of the movement was not considered to be in conflict with its voluntary character.

It was when the régime expressed its corporative economic doctrine that State intervention was accentuated. The justification was obvious. As the same co-operative economic purposes were intended

to be achieved by corporative organization and control, co-operative associations would lose importance as an anti-monopolistic instrument qualified to create a better equilibrium between the various forces operating on the market. They retained, however, full importance for making possible optimum-sized enterprises and elevating the conditions of hired labour. Indeed, the co-operative movement in agriculture was never purposefully opposed.

Fascism intended to use existing co-operative associations to effect corporative control while it was proceeding to create new forms of farm-enterprise associations better qualified for the specific purposes of corporative economy.

It is well known that owing to international events the corporative-economy experiment was never fully effected and that it soon degenerated into a policy of self-sufficiency for war purposes. It is therefore impossible to form any objective opinion on it. We may, however, examine the repercussions of the above-mentioned events on co-operation in agriculture.

Co-operative associations for processing and marketing of agricultural products (creameries, wine plants, fruit-growers' associations) which had considerably developed in some areas, stopped their expanding movement. In our opinion they were frustrated by events in their tendency to federate into large-scale associations. They more or less crystallized into the phase of development reached in 1935. The movement is now slowly recovering in the aftermath of war.

Purchasing co-operatives for farm supplies, the co-operative *Consorzi agrari*, totalled approximately 750 in 1935. They had already shown a tendency to aggregate into larger associations when in 1939 a special law, suitably modified in 1942, reorganized them into 94 non-co-operative provincial associations. The co-operative *Consorzi agrari*, thanks to the splendid co-ordination work of their National Federation formed in 1892, had by then reached a high degree of efficiency and represented a powerful instrument of progress in agriculture. Since 1930 they had established voluntary wheat pools which became compulsory in 1936. Later, compulsory pooling was extended to other basic agricultural products. Simultaneously they continued to supply farmers with their needs as producers. Owing to scarcity of fertilizers and other commodities the competitive basis was soon abandoned here also, and the trade was done according to distribution schemes issued by governmental authorities.

In their new privileged monopolistic position the *Consorzi* extended their physical facilities in the country by building elevators, new warehouses, &c. and their economic potentiality reached a very

high level. Unfortunately, some fiscal aspects of their new activities cost them the sympathy of many farmers. As the general economic situation of the country returns to normal again this, it is hoped, will prove transitory now that a law enacted only last year provides for the re-establishment of their co-operative form. Control is again fully democratic and elections are now taking place. Under the new law the *Consorzi agrari* remain provincial associations and this, for many reasons, has probably been a wise decision. Nevertheless, it must be admitted that it makes it very difficult for the *Consorzi* to operate as genuine co-operatives like they used to when their influence was restricted to minor and more uniform areas. It was then possible to pay closer attention to membership relations and keep the co-operative spirit at a high level.

In times when economic problems are gradually extending their scope to international level it would have been hazardous to break up powerful farmers' associations into smaller and weaker organizations. On the other hand, if the numerous members show sufficient interest in their associations there is no reason why the new provincial *Consorzi agrari* should not operate in a co-operative way and achieve the same results as genuine co-operatives on a different scale.

Considering that the co-operative movement in agriculture has developed on parallel lines to the phenomenon of concentration of enterprises in industry, we feel that the importance of purchasing co-operatives for farm supplies in Italy may be better emphasized, rather than by a few figures, by a few preliminary statements in a recent five-year agreement between the Italian Federation of *Consorzi agrari* and the industrial group *Montecatini*, in which the influence of Paolo Albertario, one of the leading men in the agreement, can be detected.

'In the desire to develop further an intimate and sincere collaboration in order to harmonize the particular interests of the two organizations with the superior interest of the Nation; after unanimous recognition of the necessity to place their relations on a higher and wider basis of conception and accomplishment in comparison with the past, in a sense that their function and activity may go beyond the restricted limits of purely commercial transactions;

fully realizing the advantages that may follow, in the modern industrial and agricultural economy, a unitary planning by systematic valuation of needs and possibilities, of progress of study, experimentation, production, distribution, and consumption of fertilizers and pesticides;

perfectly aware that such an agreement, by aiming at a more rational farm policy and a more intense use of technical means in the interest of production and consumption of fertilizers and pesticides, will develop

into a factor of progress of both agriculture and industry thus attaining the importance of a general national economic problem;

explicitly declaring their intention to consider the present formula of agreement, in its informing principles and modes of operation, a technical solution particularly suitable, in the country's present technical and economic conditions and public policy, to regulate relations of such wide collective interest between industry and agriculture, both sides are willing to enter upon similar agreements with others who may wish to unite in the same spirit and practices;

all this aforesaid, the persons here convening agree to give effect to the above intentions as follows:

(*a*) by promoting in mutual agreement technical progress in the means of agricultural production;

(*b*) by continuing to develop, singularly and together, experimentation, intended to find and place at the disposal of agriculture the most efficient producer commodities to make possible an increase in national agricultural production;

(*c*) by gradually intensifying consumption of the products which are the object of the present agreement;

(*d*) by re-establishing an adjustment between production of the above and agricultural requirements;

(*e*) by regulation of the market for its stabilization on equitable bases that may provide on one hand a normal profit to industry and on the other encourage farmers to make provision for their supplies to the largest possible extent with no unjustified expenses.

For this purpose both sides agree to meet periodically and exchange views, data, and all information concerning the problem of utilising the technical means for agriculture and also consult each other on the best solutions to the same problems.'

The future of agricultural co-operative organizations in Italy is, in our opinion, closely related to the solution of another organizational problem of agricultural producers.

Before the First World War, Italy had many non-co-operative associations of agricultural producers for general purposes of technical and economic progress (*Consorzi* for vineyards, olive-groves, &c.).

Owing to changes for adaptation to corporative control of production these associations were made compulsory by law and called Provincial *Consorzi* of agricultural producers. The latter had a unified character but included sections differentiated according to groups of commodities produced in each province. At the end of the Second World War they were abolished by law and are now being liquidated. Their important physical facilities, such as warehouses, processing plants, and so on, remain, together with the necessity to find a

substitute for the previously existing associations formed by the farmers, particularly for collective pest control.

This problem has been widely discussed in the agricultural press during the last few years, and it is still being examined by State technical authorities and the farmers' unions. Discussion is concentrated above all on whether the special law which is to be enacted should provide for voluntary or compulsory associations and which organizations should be allowed the use of the physical facilities of the former ones.

The prevailing tendency at the moment is for provincial associations on voluntary bases in the various forms of *Consorzi*, co-operatives, &c. The State should encourage their formation and delegate some State functions to those associations which prove themselves fit to accomplish them. The State would naturally give financial aid and would control the delegated functions.

Provisions would be made so that the voluntary associations may federate on a national basis. Control would be democratic as members would be called to elect managing boards from among themselves. In the boards of those associations to which State functions have been delegated consultant representatives would be included and designated by farmers' unions.

Compulsory associations would be limited to necessary cases as, for example, collective pest control or when voluntary associations fail. Government vigilance on administration boards would leave the powers of the members in assembly untouched.

The problem is extremely important to farmers and to the economy of the country. Discussions as to whether the associations should be voluntary or not, organized from the top-down or bottom-up, are justified inasmuch as the general opinion is held that the co-operative spirit among farmers in the country is not very prominent. Otherwise there would be no question as to the preference for voluntary associations. Undoubtedly the State can give good help in the solution of this problem.

In our opinion it is less significant that the associations be organized from the top-down or bottom-up than it is that they correspond to real economic needs of which the producers are fully aware; that they be efficient enough to meet those needs at a satisfactory cost; and that they be really administered by the member farmers themselves.

It may be wrong to set forth this problem on the dilemma of voluntary or compulsory organization. This because if the first solution is chosen we risk not seeing the birth of the organizations

which are considered necessary and if the second solution prevails we risk having them lack the warm support of the interested parties, the agricultural producers. The dilemma may obstruct the adoption of intermediate forms partaking of both the voluntary and compulsory character of which in Italy we have the interesting experiment of the land reclamation *Consorzi* as an example.

The latter are formed on the initiative of the interested agricultural producers, but by an act of public administration. The quota of consenting interests necessary to compel the others may be that of a minority. Experience shows that in this case it is always an *élite* of the interested producers and therefore worthy of special consideration.

In any case, when considering this problem, we must not neglect the possibilities of existing organizations. It was mentioned that a trend exists in American farmers' purchasing co-operatives for farm supplies by which they show much interest in helping their members to market their farm products.

The same trend is clearly seen in the Italian *Consorzi agrari* which are now reverting to previous institutional activities and are losing their State delegated emergency functions.

They are therefore faced by the problem of full utilization of their physical facilities and their economic possibilities. The *Consorzi* and their National Federation have a fine past experience of collective marketing of agricultural products both on domestic and foreign markets, and in to-day's conditions it would be a great mistake trying to relate them to the new general purpose economic associations which are going to be promoted. Many services may be directly obtained from the *Consorzi agrari* at cost. For when it be considered essential to set up new specialized co-operative associations it will always prove profitable to relate them to the *Consorzi agrari* and benefit from their long established and efficient commercial organizations. It is felt that in this way the cost of services to the farmers will be considerably lowered.

The State can and must help co-operation by educational work. In its various forms this work promoted diffusion and strengthening of the co-operative spirit among agricultural producers, the only factor that, alone, can consolidate the development and vitality of agricultural associations. It may be remembered what the United States Department of Agriculture does in this respect, also the contribution to agricultural co-operation by all grades of schools in Denmark and other countries. If means were available there is no limit to what may be done in this field also in Italy. The State alone in our country

can provide sufficient means for an adequate utilization of the illustration and research material available, and this would be a great advantage to the economy of the country.

All this we say because we are convinced that agricultural co-operation has great possibilities and a brilliant future. We do not, on the other hand, believe, like the distinguished writer we mentioned at the beginning of this paper, that the advent of a 'co-operative democracy' is indispensable to save our western civilization from the only possible application of the socialistic theory, from communism. Co-operation, with its undeniable ethical values, is a method of economic activity and its essence is strictly related to our traditional marketing system of economy, which it integrates contributing to correct its deficiencies.

The same function with greater responsibility may be seen in the intervention of the modern State into economic activity.

It is absurd to contrast such interventions at the present time and hope that with or without an expansion in the co-operative movement it will be possible to stop their growth. There is a general tendency in the whole world that points in this direction.

We may consider planned economies as characterized by more or less State intervention into economic activities. The real danger lies in the fact that the same interventions may be effected by inadequate organisms. That would mean either not entirely reaching the advantages to society that the State had planned for or reaching the same at a cost higher than necessary. A wide agricultural co-operative movement offers the State an opportunity to delegate its intervention into economic activities to the most interested groups and avoid the above danger. But it is still not sufficient to have adequate organisms for State intervention. To make them efficient it is necessary that modern States be really modern and therefore that they modify their present structure, still in many aspects too similar to that of the last century.

Only a harmonious coexistence of State and private economic activities in the various forms of individual, associated, and co-operative enterprises will in our days save our spiritual and Christian heritage, the only values in the world that make life worth living.

L. Loewe, *Anglo-Palestine Bank*, *Tel Aviv*, *Israel*

Our experience in Israel seems to indicate that the distinction between collective and co-operative cannot be made as simple as it appears in Professor Ashby's statement. From the large-scale

'communal economy' in agriculture comprising production as well as consumption, represented by the 'Kvutzot', down to the small-holder farms of the 'Moshave Ovdim' (small-holders' labour co-operative settlements) which are independent except for certain co-operative arrangements, there are gradual transition stages from one type of settlement to another.

Where the co-operative arrangements are concerned with part of the property only (e.g. heavy agricultural machinery), and where production itself, although carried on by the aid of these arrangements, is nevertheless undertaken individually, we may speak of a *producer* co-operative, but not of a *production* co-operative. Where, on the other hand, the members of a Moshav Ovdim work a particular enterprise in common and share the harvest, as is the case in several places with field crops or plantations, we find a transitional development from a *producer* to a *production* co-operative. In such instances, the farms are divided into two separate parts, the individual one including the household and farm-yard which come into each settler's private part, and the other, the collective part, to which belong only certain production enterprises, namely, those best suited to co-operative farming. At times, however, the two parts tend to compete with one another over the allocation of labour.

A number of years ago, there arose spontaneously in various parts of the country a new type of settlement where members sought to link the advantages of collective production with those of an independent household. In this so-called Meshek Shitufi, each member's household is run independently by his family whereas the entire production in all its branches is planned and carried out collectively. Externally, this settlement type is marked by each family occupying its own house, similar to the Moshav Ovdim, but by the inclusion of all farm-yard buildings within one compound and their adaption to large-scale production. All men work according to the common labour allocation, just as in the Kvutza, while the women are primarily engaged running their own households and devote only the remaining working hours (as determined by the co-operative on defined principles) to work in the communal farming enterprise. It should be mentioned that one tendency in this movement would give the women an independent field of activity besides the household, in the farm of an auxiliary farm for self-supply, and release them entirely from work in the communal enterprise.

There is a chance of the settlement form of the Meshek Shitufi finding many adherents in future, particularly among would-be settlers unable to take upon themselves the great burden of a

diversified private farm, and unwilling at the same time to forgo an individual family life.

The advantages of the large collective farm of the Kvutza over the small private farm is a division of labour permitting the individual to specialize in his work, which is a circumstance not to be underrated in the successful settlement of elements drawn from other occupational, mostly urban, spheres. It was seen, however, that the possibilities of large-scale farming, i.e. mechanization, division of labour, and organizational concentration, may be more fully turned to advantage in the field of production economy than in that of consumption economy. The more rational allocation of labour in quite a number of cases is offset by the great area of the large farm and the ensuing long distances to work. The drawback is felt the more strongly the less the job lends itself to being mechanized and performed at optional times. This applies in particular to the household, and most patently to the care of the children.

Hence, reasons of ideology apart, there are valid economic arguments for the division of the settlements into independent households and with one productive co-operative such as is contained in the Meshek Shitufi. It is true that, as a rule, this tends to place an additional burden on the women which is avoided by the Kvutza with its labour allocation on the uniform plan. The coexistence in the Meshek Shitufi of two different economic systems, the private and the collective ones may give rise to friction. Only when the co-operative spirit in the settlement has grown strong enough to ensure the voluntary subordination to a severe discipline will the danger of conflicts engendered by such friction be obviated.

The rise of the Meshek Shitufi from a combination of the features of the Kvutza and Moshav Ovdim affords good enough proof that neither of the existing settlement types can be regarded as the only right and suitable one. Each has its specific advantages and drawbacks of economic as well as social character, and each has a right to exist. The old controversy on whether the co-operative settlement built up on collective work deserves preference to that based on individual work cannot in the light of past experience be decided in favour of either, since both have proved entirely successful. With the transition type of settlement which has sprung up in the meantime, the circle is completed which had the original 'settlers' co-operative' for its starting-point whence all our present communal settlement types are derived.

It seems to me that a certain amount of bias which has been expressed against the collective arises from the idea that collectives are

*always* forced upon the settlers by the State, while co-operatives are formed by the settlers themselves voluntarily.

The facts in Israel prove that collectives which have been formed in a truly voluntary way can hardly be classed in a category different from co-operatives. Economic more than ideological reasons are responsible for the formation of one or the other, and the limits between these various forms are not strict but rather flexible.

G. L. BURTON, *Macdonald College, Quebec, Canada*

I wish very briefly to make two points. I agree with much of the very searching analysis which was presented by the opening speakers and it is needless for me to mention the points of agreement. I should like, however, to single out two on which there may be a difference of opinion. First, Professor Ashby stated that co-operatives do not make profits. This is perhaps a matter of definition, and we need not argue about it except when it comes to the matter of taxation, a problem which we have found very vexing in Canada in recent years. May I illustrate with an example. Co-operatives in Saskatchewan, which have been exempted from the assessment of taxes on their so-called profits, have found it possible to pay a higher price for creameries than private firms which have to pay corporation income-taxes were able to pay. Those who are staunch adherents of co-operatives will say that is all to the good. I believe that co-operatives are quite efficient enough to compete with private firms without any special privileges. Therefore I do not like that solution, and the answer to it is to revise our income-taxes on corporate profits, i.e. to exempt not only the co-operatives from taxes on net income but also the corporations. Fortunately our last national budget in Canada has made a substantial step in that direction.

The second point which I would make concerns Professor Visocchi's point about monopoly among co-operatives. It will be admitted that co-operatives may achieve a monopolistic position by gaining control of the sale of a significant proportion of the total output of a product. As I understand Professor Visocchi's paper, the suggestion was that this, too, was desirable since it gave the farmer a means of equalizing his position with the monopolistic situation of some of the industries from whom he bought products. That seems to ignore the fact that the consumer must eventually pay the shot. Those who follow this approach are, in fact, attempting to equalize the position of these two groups at the expense of the consumer. It seems to be a tacit admission that we cannot cope with the problem of imperfect competition in our Western democracies. Although I

realize that that is a complex problem, I am unwilling to subscribe to such a pessimistic conclusion. It would be more consistent with the general welfare to seek to eliminate the abuses of monopolistic competition in the industrial sector of the economy. Should it be considered desirable to compensate farmers, in the meantime it would seem that this should be done directly and at the expense of the taxpayer rather than indirectly at the expense of the consumer.

B. NATARAJAN, *Economic Adviser, Government of Madras, India*

Professor Ashby raised an important point when he said that with the extension of the Welfare State, the co-operative movement is weakened. No doubt, this is a very general statement which he would wish to hedge with a number of qualifications, and I do not imagine he meant it to be taken in the decisive manner in which it was stated.

So far as India is concerned, the extension of the Welfare State in recent years has not in any way hampered the growth of the co-operative movement. On the other hand, with the attainment of political freedom, the framers of the Indian Constitution, thanks to the ideals of our great leader of beloved memory, Mahatma Gandhi, the Father of the Nation, have made the attainment of a Co-operative Commonwealth the ultimate objective. In the past three years, ever since the Congress governments assumed office both at the centre and the provinces, they have been actively encouraging the growth of the co-operative movement. I would, with your permission, like to give some figures to illustrate the rapid strides made by the co-operative movement in India in recent years, more particularly after the Second World War.

The number of primary agricultural co-operative credit societies has increased from 93,800 in 1938–9 to 124,200 in 1945–6 or by about 35 per cent., and agricultural non-credit societies from 11,500 to 22,800 or by nearly 100 per cent. The agricultural co-operative societies—credit and non-credit together—have increased from 105,300 to 147,000 or by nearly 40 per cent. The paid-up capital of these societies has risen from Rs. 127·8 million to Rs. 164·6 million, deposits from Rs. 27·7 million to Rs. 54·3 million, and working capital from Rs. 31·62 million to Rs. 33·01 million. In 1945–6 the number of co-operative societies in India was 172,000, the number of members 9·16 million, working capital Rs. 1,640 million, and loans made during the year amounted to Rs. 517½ million. At present, after the partition, the Indian Union has 135,708 societies with a total membership of 8·94 million and working capital Rs. 1,660 million.

In the Province of Madras, the primary rural stores alone have increased from 21 in 1938–9 to 1,132 societies in 1946–7. During this period the membership has increased from 2,888 to 249,000 and paid-up capital from Rs. 17,000 to Rs. 5,329,000. The value of annual sales has increased from Rs. 351,000 to Rs. 48·05 million or by nearly 137 times. The membership and the paid-up capital have increased by 86 and 314 times respectively. The same trend of rapid growth is seen in two more branches of co-operation, viz. consumer's co-operation and co-operative marketing.

All this has been due to deliberate government assistance; which has taken many forms. Procurement of food-grains is entrusted to co-operative societies; in all fields of economic activity, co-operative enterprise receives preference and encouragement. Paid officials of the Government audit co-operative societies' accounts and help the formation of new societies. In Madras Province, the co-operative department is entrusted with the welfare and amelioration work consequent upon the introduction of prohibition. The co-operative societies also enjoy several concessions and privileges from the Government. Notwithstanding this active stimulation and encouragement, the movement, I must confess, has touched only a fringe of the problem of rural indebtedness. The problem to be tackled is so enormous. To cite one instance, the credit requirements of the Province of Madras for current agricultural operations are estimated to be about Rs. 2,000 million, of which only Rs. 60 million have been granted by the agricultural credit societies or about 3 per cent. of the total requirements. The problem of rural credit is colossal in the whole of India. The co-operative movement provides only about Rs. 400 million as credit. The amount of credit controlled by the co-operative societies is but a fraction of the total requirements and this is the position in spite of the fact that, on the credit side, the movement is 45 years old. Sir Frederick Nicholson, one of the ablest English civilians that India had, said at the end of the last century 'Find Raiffeisen'. In it, he thought, lay the solution to all the economic ills of India. We found Raiffeisen; but half a century of its working has led us to the conclusion that the old formula is not enough.

Professor Ashby has well said that specialized co-operation might increase economic efficiency, but may not foster the co-operative spirit. India has become alive to this truth. We in India have developed, as few other countries have done, specialized co-operation —co-operation for credit, co-operation for housing, co-operation for sale, co-operation for purchase, and so on. The credit societies have been aiming at lower interest, the housing societies at lower instal-

ments, sale societies at higher profit, and co-operative stores at bigger 'divi' on purchases. There has been a great deal of emphasis on efficiency and business methods; but the spirit of co-operation is lost sight of.

It is an awareness of this trend of development that has led the Congress Government to adopt a new idea in co-operation, viz. multi-purpose co-operative societies. The Government of Madras propose to establish one multi-purpose co-operative society for each village or group of villages which will function at once as producers', marketing and sales, credit, consumers', as well as welfare societies. Their activities will be extended to semi-processing of agricultural raw produce; for example, decortication of groundnut, hulling of rice, crushing of canes, and manufacture of gur (raw brown sugar). The multi-purpose co-operative society will occupy a pivotal position in the economic life of the village and embrace all activities from raising crops and rearing cattle to agro-industries to process their raw materials, and cottage industries to provide the villagers with gainful employment in their idle hours. When the entire economic activity of the village is brought into the gamut of a central multi-purpose co-operative society, there are great prospects for the growth of the real co-operative spirit. This change-over from the Raiffeisen to multi-purpose co-operation is conditioned by the change in time-spirit.

This objective of developing the co-operative spirit could be hastened if the conditions governing payment of share capital were also modified to suit present-day needs. Small share capital, payable in a number of easy instalments, was good enough in the past. Now the workers should also be given an equal and honourable place in the co-operative enterprise. In my opinion, the workers should be enabled to contribute their share capital in terms of work units. By introducing this slight modification, the co-operative movement would be greatly strengthened and the foundations for a co-operative commonwealth well and truly laid. Professor Ashby's suggestions made in this connexion require earnest consideration at the hands of all those interested in the future of the movement.

The Congress Party and the Government in India have a big mission before them, and they are slowly and steadily extending the sphere of the co-operative movement and adding new content to old definitions of co-operation, share capital, profit, dividend, &c. We are a 'backward country' but I must say that in the realm of co-operation we have made even more progress in recent years than some of the so-called advanced countries; and I hope such a

development on the part of an 'infant economy' like ours will be heartening to lovers of co-operation all over the world.

A. C. RICHMOND, C.B.E., *Chairman, Land Settlement Association, London, England*

The problem of the peasant or family farm that was discussed on the first day of our Conference was closely related to that of the development of co-operation which we are discussing to-day. Not only so but, since the establishment of new small farms or small holdings is in some countries being undertaken by the State, the State is concerned with the question whether or no co-operative practices should be introduced as part of the scheme for the establishment of those small farms or small holdings. This is a problem which concerns us very intimately in England, because the Agriculture Act of 1947 imposes on our County Councils the duty to provide small holdings for the benefit primarily of agricultural wage-earners who want to become independent farmers on their own account. For this reason it may be of some interest to describe an experiment we have made in England with the particular object of ascertaining how men with comparatively little technical knowledge, and less financial resources, can be established as small-holders in such a way as to be able to be efficient producers, and at the same time to earn a satisfactory livelihood.

As we have heard on more than one occasion during this Conference, small-holders have little bargaining power. Consequently they fail too often to obtain good prices for their produce and indeed suffer other disadvantages as compared with the larger farmer. To overcome these disadvantages we in this experiment established settlements or colonies consisting of about fifty holdings each. The production on these colonies consists in varying degrees of market-gardening (vegetables and fruit), poultry, and pigs. It is not easy to develop co-operation on a voluntary basis among a new group of individuals who are all strangers to one another and who consequently have no confidence in one another. Not only this, but in my experience in England wage-earners in agriculture want to become small farmers, not so much out of some strong and deep love of the land, as out of the simple human urge to be masters of their own lives. Their ambition is to be under orders from no man, but to be able to live independently according to their own tastes. Having been trained as an agricultural worker, he naturally looks to that form of life to satisfy this fundamental urge for freedom. To such a man participation in a co-operative organization is not at first wholly

attractive. It implies some restriction on that very liberty which it is his ambition to achieve. For this and for other reasons our experiment was based on a pattern which is somewhat heretical in the eyes of the true believers in voluntary co-operation. We decided in fact to establish a range of services for the small-holders on each of our colonies, and to make participation in those services a condition of tenancy. In plain language, co-operation was thus made compulsory. The small-holder on our settlements is a tenant and he cannot acquire ownership of his holding. If he wants to do that he must go somewhere else; some wish permanently to remain, others make use of the facilities provided on our estates to build up the capital resources they need in order to launch out independently on a holding of their own.

Under the terms of his tenancy agreement, every tenant must buy farm requisites through the central organization and he must sell all his produce through that organization. If he requires the use of heavy implements he has at his disposal a machinery pool on the estate and this he must use rather than call in the service of an outside contractor. The Land Settlement Association, which is the landlord, undertakes on its part to grade, to pack, and to sell the whole of his produce and maintains a store on each estate where he can buy fertilizers, seeds, feeding-stuffs, tools, in fact, practically everything he wants at prices slightly below normal retail prices. Propagating stations are provided to save the small-holder the risk and the labour of propagating, for instance, his own tomato plants for his greenhouse. Pedigree pig herds are maintained by the Association to supply him with first-rate breeding-stock, and central incubation centres are also maintained to supply the tenants with reliable day-old chicks. In this way the tenant is freed from many of the preoccupations of the small farmer, and can concentrate wholly on production.

Representatives of the tenants meet the manager of each estate every month and thus take a part in determining the general production policy, in clearing up misunderstandings, and in ventilating complaints. The production plan to be followed in the ensuing year is discussed each autumn with the tenants and a general agreement is arrived at. Once that plan is agreed with the general body of tenants, the individual tenant is expected generally to conform to it, although in practice there is very considerable latitude for the exercise of the initiative and individual taste and fancy of each tenant. Consequently the production of each holding varies to a considerable degree.

Under this system of compulsory co-operation our tenants have up till now done well. The average size of the holding is about 4½

acres. The average net income earned by our tenants has been in the region of about £500 for several years past, exclusive of the cost of food grown on the holding which is consumed in the home. Many of the tenants have earned up to and over £1,000. I do not say that these earnings will or will not be maintained in the future. That lies on the lap of the gods. The main point I want to make is this. By such a system of compulsory co-operation the small man has the advantage of large-scale organization; he has a good chance of earning a reasonable living and enjoying (and this I think is very important) a life which leaves him, his wife, and his children, a great deal more leisure than is normally enjoyed by the independent small producer. We have on all of our estates a very active social life. Tenants have their own musical societies, their own horticultural societies, their own dramatic societies, and everywhere we have our Women's Institute, our Young Farmers' Club, and other social activities. Thus the life on an estate of this kind can be varied as well as based on a sound economic foundation. When the modern State is concerned, as it is in our country, with the creation of small farms for the benefit of the agricultural wage-earner, there is, in my view as the result of experience, much to be said for basing its plans at the outset on the principle of compulsory co-operation.

O. SCHILLER, *Institut für Agrarpolitik und Ernährungswirtschaft, Hohenheim, Germany*

As Mr. Richmond has told us, the discussions of this morning and on Monday are very closely linked, and therefore I would like to make some remarks on both.

If agriculturists in the peasant countries advocate the peasant type of farming, their reasons are not mainly economic but ideological. The typical farmer's way of living, of working, and of thinking is not uniform but it shows many common features in all countries. It includes so many human qualities and virtues that we would not like to lose them from the social and economic structure of our society.

On the other side the arguments used against the peasant-farming type are mainly of an economic nature; that is, the consideration, as Professor Medici explained, that perhaps the peasant farm in the long run will not be able to compete with large-scale farming making use of all the advantages of modern technique and of large-scale management in production and marketing. It is, therefore, a matter of supreme importance to try to find a way of obtaining—at least in part—the advantages of large-scale farming for peasant farms, for example, the use of machinery as well as methods.

When we are arguing about the advantages of modern technique, we usually have in mind a certain type of machinery and the size of farm where this given type can find its optimum use. We then try to adjust the size of the farm to this machine. Would it not be more reasonable to go the reverse way and try to adjust the size of our machine to the existing size of farm, i.e. to the normal type of peasant farm? In Germany we have made some remarkable progress in this direction, and it seems to me that it will be possible, by making use of the brains and the ingenuity of our constructors of agricultural machinery, to give to the peasant farms adequate machinery to enable them to reduce the costs of production, if not to the same extent as the big farms, at least to a degree that makes competition possible.

There is, however, one essential condition for a great number of farms in western Europe, that is, the consolidation of farms. The splitting-up of peasant farms into a great number of small strips scattered over the whole area of the community makes it impossible to use machines even if they were of a special type adapted to peasant farms. We must find new ways and methods to consolidate our peasant farms which are easier, quicker, and simpler than the old method which in southern Germany took some dozen years. We are working very hard in Germany on these problems at the present time, and I hope we will find a way out of this dilemma, because otherwise we shall not save our peasant farms from ruin or collectivization.

The use of co-operative methods in the field of marketing to bring the advantages of large-scale management to peasant farms is another avenue. I can make this point very short. We have had enough experience with our agricultural co-operatives to know that it is certainly possible to bring most of the advantages of large-scale marketing to the peasant farmers on a co-operative basis.

The use of co-operative or even collective methods in the field of agricultural production requires examination. First of all I would like to discuss what Professor Ashby and then Dr. Loewe have said, namely, to question if there is any difference between the two ways of co-operation, the co-operative and the collective method. It seems to me that there is a big and fundamental difference between the two methods, if by using the term 'collective' we have in mind the methods exercised in the kolchos system of the Soviet Union. The task of the co-operatives, in the western Europe meaning of the word, is that of fostering the economic activities of free and independent individual producers, co-ordinated on a voluntary basis.

The collective system, on the other hand, eliminates the individual economic unit and, by so doing, creates one large uniform unit. The fact that the members of these greater units have their own garden plots, their cow, pig, and poultry, which is often used as an attempt to prove the co-operative character of collective farms, makes no fundamental difference. The industrial worker can have his own garden and pig too, without being a 'co-operator' in his industrial job.

On the question of co-operative methods in agricultural production, it is my opinion that there are interesting possibilities in this direction. I myself have had a rich experience in this field, although it was gathered under the special conditions of war time.

The time is too short to say more of these experiences, but we are now going to try similar methods of co-operative farming in the south Württemberg district of Germany: namely, a co-ordination of individual and independent farms on the basis of a voluntarily adopted common rotation of crops, which makes possible the efficient use of agricultural machinery on small farms. We think that by going this way we can make it possible to use machinery in many cases of highly fragmentated and split-up areas, even before land consolidation in these areas has been carried out.

Finally, a few words about collective farming. There are many arguments commonly used against the collective system as it has been developed in the Soviet Union. I myself have used these arguments for many years. But to-day I would like to place a certain reservation on these arguments. In so far as they are of an ideological nature, I think they are as well justified as ever. If one gets acquainted with the way of living, of working, of thinking of a typical kolchos peasant in the Soviet Union, one would hardly find that this is a form which corresponds to our western ideals. In so far, however, as these arguments are of an economic nature, they are not wholly justified if we are talking theoretically about the collective farming as a form of farming and not of the special example of the kolchoses of the Soviet Union. All our arguments, that, for instance, the earnings of the members of collective farms are very low, that there is no real interest on the part of the members in the work and in the yield of the work, the red tape, &c., refer to the special conditions in the present form of Soviet economy, and one cannot even know whether the form of Soviet economy will not change or develop in any particular direction.

Up to now collective farming has been experienced almost exclusively under these special conditions, under the economic

climate of the Soviet Union. There is almost no experience of running a collective farm under another economic environment outside of the Soviet Union. I am not sure whether it is right, as Professor von Dietze told us, that collective farming can exist only under an economic and social order similar to that existing in the Soviet Union, namely, an order of subordination instead of co-ordination. Theoretically at least it seems thinkable that a collective farm could exist also in the normal economic and social order to which we are accustomed. It would mean that the members of the collective farm would not be obliged to deliver nearly the whole net yield of their farms by order of the State to the State for prices that are only a tenth or a fifteenth of what they would be in a normal relationship to industrial or consumer goods. They would be allowed to sell their products voluntarily on the market, for normal market prices, and thus have the same profit out of their production as any other farmer. It would mean that they really would be interested to work and to increase production. That interest is naturally lacking, if every increase of production is more or less for the benefit of the State, as it is in the case of the Soviet Union. I do not know whether this form of collective farming is being experienced in Palestine, because I heard of the experience there for the first time to-day.

In Germany there have been tendencies since the war on the part of the Socialist parties to introduce a kind of communal farming in connexion with the settlement programme. In order not to be blamed for introducing a kolchos system on German soil, the initiators of this idea assert that it is a new form of common management of farms—a so-called 'Farm Society'. I told them, that if they are striving for an adequate form of common or collective farming and of distributing the net income of this collective enterprise among its members, they will not find any better way than the one adopted in the Soviet Union. There are three possible forms under which members of a collective enterprise can participate in its yield: (1) The capitalist form, i.e. the participation according to capital invested by them in the collective enterprise. This form was tried in the earlier stage of collectivization in the Soviet Union and did not bring about good results. (2) The communist form, i.e. the participation according to the needs of each individual member. This form I met on some collective farms in the United States, operated by sectarians, the Mennonites, which had functioned successfully there for a long period of years. But this form will prove successful only on the basis of a strong faith and religious feeling similar to the communes in the early days of Christianity. (3) The

so-called socialistic form, as the Bolshevists call it, i.e. the participation according to the amount of work which every member puts into the collective enterprise in the course of the year. This form seems to me the most reasonable and economical one.

Summarizing, I would say that the theoretical basis of the collective farm in the Soviet Union is not as bad as we are accustomed to believe, and, if the practical results are not as good, it is mostly due to the special economic and political conditions of a totalitarian police state. In order not to be misunderstood, I may say I am strongly opposed to any kind of collective farming in our own country. But if we oppose it, we should use the right arguments. These arguments will be more of an ideological than of an economic nature. It is inevitable that we will have to concern ourselves with the ideology coming from the East, and I think it symptomatic that our Seventh International Conference of agricultural economists has given so much space to the discussion of collective and co-operative forms in agricultural economics. It is said that these two different forms of procedure for operating economic production are incompatible. I believe, however, that one can find the way out of this dilemma; that is, to strengthen the free and independent individual economic units by methods of co-ordination on a real co-operative basis, thus maintaining their existence against the danger of collectivization.

L. J. NORTON, *University of Illinois, Urbana, Ill., U.S.A.*

We had the pleasure this morning of listening to two very valuable and constructive papers by Professor Ashby and Professor Visocchi. On one point I would take a middle position, unless I have misunderstood the position that each of them took. Ashby spoke of a Co-operative Commonwealth. He did not develop what he meant but it is not difficult to imagine. Professor Visocchi emphasized the business aspects of co-operation. It seems to me there is a middle ground between these two points of view.

Why do farmers co-operate and do so all over the world? Basically for the very simple reason that the volume of business of the individual farmer is too small to allow him to do alone many of the things which he thinks would be advantageous. He therefore joins with his neighbours on a small or large scale to form an organization to do some of these things. In countries with small farms, co-operation can be developed as an excellent tool to improve specific situations, and the development may go so far as to become part of one's way of life. But it seems to me that the really important thing is that a

co-operative be used as a tool to improve a specific situation. We have found this true of co-operatives in the U.S.A. which deal with all sorts of situations. Before I came to this Conference I was privileged to visit co-operative leaders in three European countries, Denmark, the Netherlands, and Belgium. I found these people doing very much the same sort of things that people in the same lines were doing in the United States. The farmer is interested in this very valuable tool, if he sees tangible results flowing to him from its use.

I have been trying to think how many co-operative organizations I belong to, incidental to a very small farming interest in the United States, and I believe it is four. In defining benefits, it seems to me that they can be divided into two general groups: first, improvement in specific situations, which may be related in marketing, in purchasing, in land improvement, or in the ownership of some tool of production, such as an improved bull or a threshing machine. I will mention two instances where it seems to me co-operatives have done excellent jobs in various parts of the world. The first is in the preparation of products to be sold in a distant market, Danish butter in England, or Californian oranges in New York City. Co-operatives have demonstrated a capacity for putting out products of the quality desired and of packing them in the way they need to be packed, doing the other things essential to a good market, and then organizing the agencies to get the products to market. Co-operatives have done that in many places, but in many other places in the world it still needs to be done. The second is on the side of farm supplies. Co-operatives can do much, and have done much, to ensure that farmers get the qualities of supplies which modern scientific techniques show to be desirable. This has been one of the most useful things which our purchasing co-operatives have done in the United States. I have heard it said of a very large egg producer in the State of New York that one of the reasons for the very considerable increase in the average production of eggs per bird in that state is that the co-operatives took the lead in seeing that the feeds the farmers bought were scientifically correct.

These are two examples of what co-operatives can do in specific situations. I could mention many others, not only in America but also in Europe and on other continents. The other general benefit which co-operatives confer is that they can retain for farmers the earnings, or savings—I will not quibble about what you call them—from operating a part of their business in which they cannot individually engage. The fact of the matter simply is that an efficiently organized co-operative can earn returns for the people who use

it. That is true regardless of what economic theory may teach about the absence of profits or otherwise. I know this from personal participation. Professor Visocchi said this morning that the co-operatives cannot obtain prices that deviate very far from market prices; I think Professor Ashby would also agree with that. All of the experience of co-operatives in the United States confirms this opinion, but by improving specific situations of which I have mentioned two, or by organizing an efficient business, with the advantage of a larger volume, they can increase returns to farmers, provided that they attract or develop within their group the type of business ability necessary to operate a business successfully.

Where co-operatives failed in the U.S.A. was in attempts at price-raising measures, though many of them made the attempt. I suspect it is a natural tendency of co-operatives the world over to attempt it. Prior to the development of our price-support programmes in the U.S.A., co-operatives tried price support in cotton, in tobacco, and most particularly in market milk, and failed. In most of our large city milk sheds prices to farmers are now set by formulas fixed by the Government. This system followed one involving the negotiation of prices between dealers and the co-operative representatives of producers. These formula prices in turn cannot deviate far from supply and demand conditions. Dr. Stine said yesterday that in his opinion, with all the elaborate price-support schemes which we have in the United States, the average level of prices was probably not affected by more than 5 per cent.

The question of government and co-operatives was brought up by most speakers this morning. For the good of both the co-operative and the farmers who trust the co-operatives, it is my opinion that co-operatives should keep themselves free of government dictation. They should maintain their independence. A government, of course, will provide enabling legislation; it may advance credits to promote desirable types of co-operatives; it will provide educational work in the area; it may even organize and promote co-operatives. Our governments, both State and national, do all these things in the United States, but they do not operate the co-operatives. And I think that if a government official went into the office of any co-operative and began to dictate either policies or operating procedures on anything but an advisory basis, he would be speedily invited to leave. I do not think that a bureaucracy anywhere will ever have the flexibility or have within it men who can deal with business situations to make wise decisions for a co-operative.

A personal word. I helped in a modest way to organize the

co-operative credit system in the United States in 1933–4. It was mostly what we call in the United States, leg-work. But I actually did participate in organizing these associations, I think, in more states of the United States than any other single individual. These were the production credit associations to provide loans to farmers for operating capital purposes. The Government supplied practically all of the initial capital by direct investment in these associations. It was therefore a very simple organizing job. Farmers needed credits and the Government offered them the initial capital. But the structure of these co-operative credit associations was such that losses, if any, fell on the share of the capital that was supplied by the local farmers who borrowed. The local associations were quickly given full responsibility for making loans. In other words, although the Government put up all the initial capital, the structure put the responsibility on the local people. The Government did the organizing, did educational work to train the personnel and the officers in making sound loans, but the actual making of the loans was rapidly transferred to the hands of the co-operatives. This had very important results. The farmers after some experience realized that they were responsible, and they assumed that responsibility.

I well remember a case in the summer of 1934 when the associations were just getting started. The officers of one of the banks which advances the credits to associations were considering a loan made by one of the associations, which had become delinquent. The president of the bank was somewhat at a loss about this loan. As representative of the Production Credit Commissioner, I said to him, 'Sell it back to the association; they've got the funds; let them carry it themselves.' He said: 'That's a fine idea. If they have to carry it themselves, they'll collect it.' This became the routine procedure.

Now, after sixteen years, about 60 per cent. of the capital in these associations is held by the farmers, either through purchase of stock required to get loans or as an investment or by earnings which have been retained. In a few years, this system will be on a fully self-sustaining basis and will be run by the farmers with a minimum of government supervision. Regardless of any bureaucratic tendencies which might develop in the conferring agency, and there are certain bureaucratic tendencies developing in connexion with these organizations at this time, the farmers who actually build them up will see to it that they maintain the right to run the association. My opinion is that if the farmers demonstrate that they can run them successfully, their wishes will prevail. If local farmers had not been given the responsibility, this would never have happened. It so happens that

over the sixteen-year period the government organizing and supervising agency has been headed up by two rather remarkable men. One was originally a bond salesman in a bank in a rural area who had the vision of co-operative credit and above all knew that people performed best only when they had responsibility. And the other was a professor of agricultural economics before he went into the government service. Those men said from the start, if we are going to make this thing work we must put the responsibility on the farmers.

I wish to tell one story as to the way I proceeded in organization work. I organized the Association at Fresno, California, in the San Joaquin Valley. A discussion developed within the Board as to who should be the secretary. The by-laws provided that the Board of Directors, elected by the organizing farmers, should select the secretary with the consent of the president of the supervising agency. The Board of Directors of seven farmers met on a hot afternoon, and asked me to say who should be secretary. I refused to do anything of the kind. And they balloted, I think, fifteen times, and after every ballot they appealed to me to decide for them. Finally, they elected a secretary unanimously. It became a very successful Association.

Someone said this morning that this particular type of technique was nonsense. I do not think so. You must let the farmers have the responsibility for the development of really effective co-operatives.

To conclude, I would agree whole-heartedly with the implication of Professor Ashby's paper that any government which does not use the tool of co-operation to solve certain problems of its agriculture is making a very serious mistake. I also agree with what I understood Professor Visocchi to mean when he said that a co-operative must emphasize the things which the individual farmer recognizes as being valuable to him.

K. SKOVGAARD, *Den Kgl. Veterinær- og Landbohøjskole, Copenhagen, Denmark*

First of all I wish to express my full appreciation of the two excellent papers given this morning; each of them dealt with the problem of co-operation in a most comprehensive way, and taken together they cover a very broad field of this very important subject. For this reason, and as I agree with most of the observations made by the two speakers, I do not have much to add. Nevertheless, there are a few comments I wish to make.

I have a special reason for appreciating the placing of the problem of co-operation on the agenda of this Conference. The co-operative

movement is of great importance to agriculture in my country. The Danish farmers have practised co-operation extensively for many years, but we have never taken the trouble to study this specific form of enterprise in a scientific way. It has been taken too much as a matter of course. I find it most useful, therefore, to get so able an analysis of co-operation as we have had to give us a statement of where we stand and where we are likely to go and of the implications which may turn up in the course of development.

Professor Visocchi in his paper this morning made the estimate that 50 per cent. of the Danish agricultural marketing was performed by co-operatives. This percentage, however, depends on what we are measuring. Of the outgoings from the farm I think as much as 70 per cent. is sold through co-operative societies. Besides marketing, many other production activities are organized co-operatively, and most of the Danish farmers will hold membership of 10–15 societies, and a membership of as many as 20–5 is quite usual.

In only a few cases has the Government or any other outside body had any influence on the organization or promotion of the co-operative movement. It is organized solely by the farmers themselves, beginning at the bottom with the local societies and bit by bit adding the superstruction as it has been found expedient to organize a central body.

I come to one of the points made by Professor Visocchi—the importance of education. I do admit the usefulness of education on co-operation, which may be valuable and even necessary in many countries. In my country, however, this type of education has been taken up only in recent years. The Danish farmers learned about co-operation through example and they applied the principle on ever increasing fields of production. The Peoples' Folk Schools in Denmark have had great influence, not, however, by teaching on co-operation but by influencing the mentality and spiritual attitude of the farmers and preparing so to speak the ethical background of the co-operative movement. For, even though I fully agree with Professor Ashby that co-operation is purely and simply an economic enterprise, to build a successful co-operative movement the members must have certain ethical qualifications.

In my opinion one essential condition of co-operation is uniformity so as to eliminate points of divergency as far as possible. The members must have uniform economic interests, and uniformity of education, of cultural, and of social standards. Even uniformity of religion is very essential. The fewer the problems which may give rise to disputes and mistrusts the better. The Danish co-operative

organizations are single-line organizations, each of them established to solve or deal with one singular problem of production and each of them organized in its own way peculiar to that line as found appropriate by its members. For this reason a marked uniformity is found within each co-operative society, but comparing the different societies you will of course find much dissimilarity in ways of doing things.

I listened with great interest to the comment made by Mr. Richmond ont he experiment made by his society in organizing large numbers of small holdings within a single co-operative performing all kinds of services for the members. At the present stage of development such institutions would have only a meagre chance of success in my country. They would be too heterogeneous and lead to disputes and discontent.

In the discussion some effort has been expended to find a distinction between co-operation and collective organization. I do not think it is of much use to elaborate this problem, as I find no difference. Co-operation is a collective organization, anyway in the free-enterprise society, and the problem would not arise had it not been for the use of the word collectivization in connexion with what is going on in the communistic societies. In this connexion I wish to comment on a statement of Professor Ashby's on the character of membership in co-operative societies. If I understood Professor Ashby correctly, he was of the opinion that it is the farm which is the member and not the farmer. I disagree. It may become so in another order of society, but it is generally not the case in a private-enterprise society. In my country the members of most agricultural co-operatives are jointly and severally responsible for the liabilities, and they are responsible with all their property. It is the farmer personally who bears the risk and not the farm, and the same holds true in co-operatives with limited liability. The members personally lose if the co-operative fails or breaks down.

Professor Ashby expressed the opinion that the members of co-operatives are losing independence, an observation which is contrary to experience in my country. The more co-operatives we have had the more independent the farmers have felt themselves both economically and, as a consequence, spiritually. The explanation is not difficult to give. Co-operation in Denmark meant, as it will mean in most countries, liberation from the middleman's control, and it fostered self-confidence as the farmers became able to take care of their own business. Furthermore, the farmer is not made dependent on the co-operative in the sense that he is forced to

conform to the decisions made by the organizations. He must, of course, do so as long as he remains a member, but he is a member only by his own choice, and if he disagrees with the leadership he is free to leave and to sell his produce or buy his supplies elsewhere. Actually you will find that members come and go in Danish co-operative societies, but when the patronage is so well maintained it is due to the fact that the farmers on the whole find it to their advantage to stay in. In other words, the co-operatives have to adjust themselves to changing conditions to keep their members. There is no final form and no final definition of co-operation, and Professor Ashby is quite right when he observes that in our day there is a monopolistic tendency in co-operation in many countries. We find the same thing in Denmark. The great central co-operative organizations are endeavouring to control the agricultural export business, but this tendency is in full accordance with the general economic development. It is one of the new fronts in co-operation to defend the interests of the members.

The problem of taxation has been dealt with by Professor Ashby and other speakers. I wish to say that I do not find it justifiable to tax the profits made by co-operatives, as the interests of the members are to get the highest possible prices or lowest possible costs, while no motives are present to maximize the profits of the organization. The objectives of co-operatives are to improve the earning-power of the members and not to make profits or build up funds, a fact that distinguishes co-operation from private enterprise and shows that co-operation is a special form of economic enterprise. This difference is further emphasized by the ability of the co-operatives to run their business on a low-profit or even a non-profit basis, as the primary payments may be adjusted in such a way as to balance the ingoings and outgoings.

J. HESPEL, *Institut Agronomique de l'État à Gembloux*

My object in intervening in the discussion is simply to help those of you who have occasion to peruse the agricultural economic literature of my country to avoid certain confusion in the interpretation of the statistics relating to agricultural co-operation. For us the term agricultural co-operation is not exclusively used in the sense of the economic activities of co-operatives strictly defined. From the discussion which we have heard up till now, the term co-operation would seem to relate exclusively to the economic activities of co-operatives. But, in fact, in my country these agricultural economic activities are not exclusively monopolized by co-operatives.

The co-operative is one of the juridical forms of commercial society, but it is not the exclusive form. Our law provides for various types of society which can pursue a commercial activity over and above the co-operatives, notably, for instance, the professional unions.[1] The co-operatives are commercial societies in a strict sense and are therefore subject to the commercial code of commerce. They are able to carry on transactions with people who are not members and they can make profits. I should add that alongside these two forms of organization (co-operatives and professional unions) which have a precise legal definition, there also exist numerous associations which have not got a precisely defined legal status.[2] Our mutual societies (*sociétés mutuelles*) are also able to pursue economic aims, since they virtually monopolize insurance against livestock mortality. That does not mean that certain limited companies (*sociétés anonymes*) are not also concerned with this type of insurance, especially for pedigree animals of value which our modest mutual societies would not be able to insure without incurring too great a risk.

Co-operation in my country can pursue aims which are not strictly economic aims. For instance, a professional union could organize a school or a machinery exhibition, a museum, &c. It is vital that those who consult our economic statistics should understand this characteristic. I draw your attention now to the enormous importance of co-operation—in whatever legal form—in my country. Our agricultural population comprises approximately 320,000 cultivators. Of these, about 220,000 cultivate an area of less than 5 hectares, with an average area of 2·8 hectares. There are, therefore, approximately 100,000 cultivators who cultivate an area greater than 5

[1] Amongst the activities of an economic nature (provided that they do not produce any gain or profit to the union), we might instance purchase for resale to members of seeds, fertilizers, machines, livestock, &c.; purchase and resale of harvested products of members; purchase of livestock, machines, &c., intended to remain the property of the union for the use of members for the exercise of their agricultural profession. But the law stipulates that a professional union is created exclusively for furthering professional interests and cannot itself practise the profession or calling. The union, therefore, cannot create a buying and selling syndicate which makes a gain or a profit for the union by selling to third parties.

[2] The law recognizes the civil personality of certain associations. The co-operatives possess it in view of their status as commercial societies, and recognized professional unions also have it equally. In an association without a civil personality, the law only recognizes the individual members. These societies are able, within the limitation of their statutes, to make a legal convention which may be recognized by the courts, but the association as such has no autonomous existence. The law recognizes only the individuals which are part of it, but from the moment that it possesses a civil personality there exists something more than just the individual members. The law considers the association as having, in addition to the personality of its members, a personality of its own.

hectares each. Added to the activity of these 320,000 cultivators themselves there is, of course, the work of the members of their families and some 30,000 wage-paid workers.

Among the co-operatives (we have about 2,000 of them) I should like to draw your attention also to our Rural Credit Banks (*Caisses rurales de crédit*) which are local banks which function according to the principle of the *Raiffeisen* banks which are, as you know, of German inspiration. We have also numerous societies which are concerned with the purchase of raw materials and with the sale of harvested products. The *Veiligen* system is also being developed quite strongly, at the moment, on the model of the Netherlands.

As for the agricultural professional unions, they are mainly concerned with the defence of general agricultural interests. These are also the concern of the breed societies, the societies for the prevention of bovine tuberculosis, the *ligues de fermiers* (Farmers' Leagues), as well as organizations of rural youth. These associations are grouped into federations, often very powerful, among the more important the *Belgische Boerenbond* and the *Alliance Agricole* and the *Boerenfront*. I group these together because they are all of Christian inspiration. Alongside these three associations we have two, namely, the *Fédération Nationale des Unions Professionelles Agricoles*, and the *Fédération des Syndicats Agricoles*, which are neutral in the religious sense.

I listened with the greatest interest to the paper of Professor Ashby, and especially when he was dealing with the definition of the conditions to which true co-operatives should conform. In my country there is no lack of agricultural organizations who masquerade under the name of co-operation, but which in reality are nothing of the sort. We have attempted to provide some remedy for this situation. Not long ago our former Minister of Agriculture, Mr. Lefevre, set up a Commission with the object of defining the status of a genuine co-operative. The burden of the report was that only societies which conform to certain conditions should be able to use the name co-operative. If these conditions were complied with, then the societies would be recognized officially as co-operatives, and would be able to make use of that appellation in their commercial operations.

I had the honour to be a member of the group working with the Minister Lefevre, and, while listening to Professor Ashby, I thought of the recommendations which we proposed: the division of benefits among the members in proportion to the amount of business transacted; the limitation of the number of shares per member; the

allocation of votes at the general assembly; the fixing of a simple interest on capital invested without other rights; the conditions provided for defaults and the obligation to create a sufficient reserve fund before proceeding to a division of benefits. These stipulations in our case had been dictated by experience. Certain of our co-operatives had experienced failures due either to lack of capital or to lack of specialization or to the technical or commercial incompetence of those called to direct them.

The three types of association of which I have been speaking, the mutuals, the professional unions, and the co-operatives, are therefore free associations. I hope, however, that I shall not be departing too much from the subject in drawing your attention to the existence in Belgium of certain associations which are grouped according to the method of official representation of agriculture. In Belgium every legal canton contains from ten to twenty villages. In every one of these cantons there is an agricultural committee (*comité agricole*). The people entitled to be members of these committees are the cultivators, the landed proprietors, the agricultural workers, and graduates of higher agricultural or veterinary educational establishments. These committees each send two delegates to a provincial body (*la Société provinciale d'agriculture*) the office of which is called the Provincial Agricultural Commission (*Commission Provinciale d'Agriculture*).

Over the *Société Provinciale* there is in each province what is called *La Chambre Provinciale d'Agriculture* which establishes liaison between the free associations and the official associations. *Chambres Provinciales d'Agriculture* send members to form the *Conseil Supérieur de l'Agriculture*, which also includes delegates appointed directly by the Minister of Agriculture, notably representatives of university agricultural departments. The President of the *Conseil Supérieur* is appointed by the king, who chooses between two members whose names are submitted to him by the *Conseil Supérieur*. The object of this latter body is to give its opinion of projects which are put before it by the Government, but it can also operate on its own initiative.

Our official agricultural organization is often criticized on the grounds that it is not sufficiently useful in practice, and for that reason a line of thought has been put forward from time to time in my country which would substitute a system of electoral representation of cultivators for the organization I have just described. All cultivators would be members obligatorily of the committees (*comités*) and would have the right to vote for the delegates to the *Chambres Provinciales d'Agriculture*. The *Chambres Provinciales* them-

selves would nominate the members of the *Conseil Supérieur*. The first idea of this elective system was put forward by the great sociologist, Hector Denis, who was Professor at Brussels University. The idea was taken up by Monsieur Arthur Wauters, who made it the subject of a parliamentary project. Monsieur Arthur Wauters later became the Belgian Delegate to the Executive Committee of F.A.O., and at the moment he is the Belgian Minister at Warsaw. The project was taken up a second time about two years ago by Minister Lefevre, but again without practical result. Such a system of elected representation would give, in my opinion, the opportunity to all cultivators to place before the public authorities in an effective and formal way, their opinions on all economic, moral, and social problems which might arise.

D. R. BERGMANN, *Institut National Agronomique*, *Paris*, *France*

Recently there has been discussion about machinery co-operatives. On the one side, it is said they can help to maintain the small farms by increasing efficiency; on the other, it is feared they will destroy the 'family farm' system and pave the way for a collectivized agriculture. We now have more than 8,000 machinery co-operatives in France including those which engage only in threshing work. They own nearly one-fifth of all the tractors in the country. So, without attempting an exhaustive treatment of the matter, I would like to make a few comments on this controversial question.

It seems to me that machinery co-operatives will not prevent small-scale farms from being less efficient in their use of machinery than the larger ones. Machinery owned by a co-operative of small farmers operates on smaller fields (even if the scattered parcels of land have been regrouped). The co-operatives have to use smaller implements which have higher unit costs. They have extra accounting expenses and may find it difficult to get an able manager. Machinery co-operatives have difficulty in providing full employment for their employees. When it rains, the farmer finds something for himself and his men to do; a machinery co-operative, especially if it is a small one with only one or two tractor drivers, finds it difficult to employ them during the idle days or seasons.

Machinery co-operatives therefore will not provide the same advantages as large-scale operation. They will not by themselves maintain the small-scale farms. They are, however, a great help, even to the larger farms. Some modern implements require acreages which are greater than even the large-scale farms as we know them in western Europe. Machinery co-operatives are proving very

successful in the handling of those specialized machines. Thanks to the pneumatic tyre, they can operate over a fairly extensive radius. These large machinery co-operatives operating a sufficient number of the various special implements have attained first-class efficiency. It appears, therefore, that this type of co-operative is more durable than 'one-tractor co-operatives' attempting to keep a few undersized farms alive.

Can one infer from the success of machinery co-operatives that they will absorb the individual farm businesses thus causing great changes in the structure of the modern State? Judging by some experiences in Florida and in eastern Europe, the answer seems to be yes. In Florida, some co-operatives are now performing all the operations of citrus growing. Many farmers have retired to the town and their role is merely that of an investor. In eastern Europe, machinery co-operatives are a definite step on the way to a collectivized form of agriculture. In both cases, however, the economic conditions are very different from those prevailing in western Europe. Whether similar developments are likely in this latter region is thus not so much an economic as a political problem, and discussion here seems unprofitable.

W. E. CAVE, *Everleigh, Marlborough, England*

The President has very much embarrassed me by introducing me as a farmer. As such I am one of the subjects of your analysis and I feel therefore that I have no right whatever to butt in. By speaking at all, I am about as presumptuous as a bacillus if it were to step out of its test-tube and address the doctors who were conducting the experiment.

I am going to confine myself to the subject which the last speaker dealt with. It seems to me that in England the country is fairly well covered by agricultural co-operative societies carrying out buying and selling on behalf of the farmer. It is covered in the sense that any farmer who really wants to take part and work through a co-operative society can do so. But we have in England a very considerable number of farms round about the 100-acre size, and those farms seem to me to be some of the most difficult of all to organize. They are too large for the work to be carried on by hand labour alone, but they are too small for mechanization, because the capital cost of mechanization is too high in relation to the total of the farm's output. I think it will be agreed that the smaller farmer, and when I say smaller farmer I mean the 100-acre farmer, is, generally speaking, much more efficient than the large farmer in dealing with his live-

stock, in the production of milk, eggs, pigs, and so on, but when it comes to the growing of cereal crops, of potatoes and sugar-beet and that sort of thing, he is at a very considerable disadvantage compared with the larger farmer who can completely mechanize most of these crops.

There is therefore a big place for co-operation in England in providing machinery to help the small farmer to overcome this inherent difficulty, and it would be extremely helpful if this could be really effectively carried out in England. It has been done to a certain extent in Buckinghamshire by the parish machinery pools, and during the last year or two it has been done quite effectively in the case of grass drying. Mr. Currie could probably tell you very much more about that than I can, because he is very intimately connected with such an enterprise. I think that the co-operative societies should start to provide a machinery-hire service, which would be of much greater assistance to the smaller farmers than merely pushing their buying and selling activities, which in any case is a very competitive business.

F. GRUNSEIS, *Bundesministerium für Land- und Forstwirtschaft, Wien, Austria*

In view of the peasant structure of our agricultural economy and in view of Austria's geographic location between the west and the east, we take a very particular interest in the problems which are being discussed at this meeting, especially the questions of peasant farming and of agricultural co-operation, which are the concern not only of our government administration in Austria but also of our scientific studies. We have therefore followed with greatest attention those who have spoken on these subjects.

The peasant farm of family size is a typical and essential feature of our country. This is true for the farmer in the high mountain areas as well as for the farmers in the low country. The personal freedom which he enjoys as proprietor of his own land is an essential reason for his power of adjustment to the most varying conditions. In the spring of 1945 when the fury of the war had passed over our country and deprived very many farm enterprises of livestock and other capital, our peasants set to immediately with reconstruction work. This was possible because the family farm of the peasant type is better equipped to overcome periods of crisis than any other form of enterprise. The stimulus which comes from the desire to maintain the material existence of the family is so strong that also the great obstacles can be overcome.

The personal freedom of the Austrian peasant remains unaffected when he becomes a member of a co-operative association. The members of the co-operatives are proprietors of farms irrespective of the size of the farm, and they voluntarily—without any compulsion from government or any other agency—co-operate for a common economic purpose. The independence of the single-farm enterprise and its management is completely safeguarded. The collaboration applies only to certain activities of a commercial and technical character which are taken over by the co-operative, i.e. such activities as cannot be adequately and efficiently carried out by the individual farmer.

This principle is maintained also with those co-operatives which in the last few years have been established to enable peasants to make more extensive use of farm machinery and to improve the cutting and transport of timber.

The Government encourages the foundation of agricultural co-operation where it is being tried for the first time; it acts as a pioneer of co-operation for certain special objectives or in particularly undeveloped localities.

We Austrians hold the opinion that the principle of voluntary membership is an indispensable prerequisite for the favourable development of agricultural co-operatives, and one can hardly speak of agricultural co-operatives in the true sense of the word if the principle of voluntary membership is replaced by compulsory collaboration, and when the voluntary subordination under the leadership of the co-operative is replaced by the order of some authority which does not owe full responsibility to the members of the co-operative.

We are quite convinced that the preservation of the independent family farm and of the principle of voluntary collaboration in agricultural co-operatives are indispensable conditions for the healthy development of our peasantry without which we cannot picture the future of Austria and of the whole of central Europe.

A. CALLOWAY, *Massey Agricultural College, Palmerston North, New Zealand*

I am indebted to a colleague of mine, Dr. Lowe of Massey Agricultural College, New Zealand, who had hoped to be present at this Conference, for a number of comments on this subject which I would like to make to you. The co-operative movement has taken only a minor place in New Zealand's farming, but there is one outstanding exception, namely, the processing side of the dairy. New Zealand can

claim the unique distinction that all of the butter and cheese factories are co-operative enterprises at the present time. I think that is unique, but I may be mistaken. New Zealand is a very young country, and the emergence of co-operation began in 1882, when the discovery of refrigeration opened up an apparently limitless export market. Privately owned factories operated side by side with the co-operatives, but by 1920 90 per cent. of the 579 factories were co-operatives.

Thus New Zealand's major industry—the dairy industry—has become wholly co-operative despite the fact that our short history shows that dairy farmers in general have not shown themselves to be filled with co-operative zeal. What has happened is that the State has been willing to do everything to give the co-operative societies the legal framework for their special need and have encouraged efficiency by sending out travelling instructors. Professor J. B. Condliffe, himself a New Zealander, and now of the University of California, says in his book, *New Zealand in the Making*, 'Great credit must be given to the unrecognised work of unnamed civil servants who directed the attention of New Zealand dairy farmers to methods of rural cooperation. They were not content with generalisations, but prepared practical, simple, detailed forms of organisation.' Even now the one main stated purpose of the Dairy Division of the Department of Agriculture is to give advice to groups planning to set up dairy factories on co-operative principles. With improved transport, the internal economies of size had their effect, and amalgamation has led to fewer factories but to greater output.

Over recent years it may be held that a certain rigidity has crept into the system. In 1934 the State set up a Commission which zoned suppliers by restricting their choice of factories and made provision at the same time for the grading of supplies and payment with grade differentials. That is to say, there was a rationalization of supply and control of quality of produce. In an important sense this control of the factory-supply was undertaken not because the societies were co-operative but because the step was nationally important in a period of emergency. Concerned with the quantity of produce and with saving of truck-miles in its collection, the State gave virtual monopolies of the supply in any particular area to those factories. Justification was claimed for putting pressure upon and rendering untenable the position of the proprietory factories (by then few in number) on the ground that a monopoly run co-operatively might be freer from criticism than a monopoly given to private interests. There must always be a clear limit to such compulsory democracy. A

long-established tenet of the co-operative movement is that it is essentially voluntary. Zoning has made us something less than this, and compulsory zoning has remained while other war-time measures have disappeared from New Zealand.

The significance of zoning should be judged not by those instances where it is virtually unnecessary because of the shape and natural limit of the territory covered, nor where the rules allow in fact the choice of as many as four factories, but by those instances where choice is completely restricted. Where a zoned area is defined and only one factory sends its trucks to collect cream along a particular farmer's road, that man's right to change over to another factory is worth very little. Some protection is provided by the fact that such zoning boundaries are the result of agreement, and also by the outstanding personal authority of the leader of the Commission which arranges the zoning.

This may seem to overstate the dangers of control, and the co-operative structure should reduce the inevitable tensions to a minimum. It is undoubtedly true that there was more freedom before 1934 than was required to protect the interest of the supplying farmers. It may well be true that there is too little freedom to ensure, on the one hand, the spur of efficiency and the reward for initiative, and, on the other, the gradual elimination of the smaller, less efficient, less well-placed factories.

The balancing of these conflicting claims of freedom and order are as difficult in their own sphere as are the claims of the larger aspects of economic and political life. At the moment the State in New Zealand seems to have swung rather far in favour of order or planning. The guaranteed price system from 1936 onwards removed the main reason for the excessive instability of supply, first by raising the pay-off and making it so nearly calculable that individual factories could not at any rate attract suppliers by promises of better return due to their superior marketing arrangements. But unless one regards all problems as already solved in the industry, it seems unwise to fix a *status quo* too rigidly. It is quite possible that less local monopoly plus the retention of such proprietory factories as were of adequate size and in suitable places, might well provide the kind of stimulus to positive experiment and improvement that could confer benefits on the whole industry. There is a danger that the farmer-directorate of a co-operative concern of ordinary efficiency will be quite content to carry on in the accepted way. It is the long-term effect of this lack of stimulus that is to be feared, and that is the point I wish to emphasize.

D. B. WILLIAMS, *Roseworthy Agricultural College, South Australia*

As workers in an applied field agricultural economists have to some extent depended on economic analysis for the theoretical models which form a basis for their science. The economics of the individual firm, particularly its cost relationships and distribution theory, form the basis of the analysis of co-operatives and the modern State. Political factors might be superimposed, but the situation which has arisen and which is exemplified by Professor Ashby's two-way choice between collectivism and co-operation is surely a result of an economic distribution of income, and particularly the institutional factors in which those economic processes occur. Co-operatives may be considered in the light of production economics and in the light of distribution theory.

Enough has been said during this discussion to draw out the two important principles on the production-economic side. Firstly, the question of economies of scale, and, secondly, the question of monopolistic competition. In Australia both are very important, particularly in the processing industries of wine making and butter making, and statutory protection has been given to those monopolistic powers in many of our industries. Two price scales, with a home-consumption-price higher than the world parity, are a common feature of pre-war Australian agriculture.

When we turn, however, to the other side of the analysis, the income-distribution side, the situation presents problems which are more ticklish and yet more fundamental. In particular this question of profits, raised by Professor Ashby, mentioned by Dr. Burton, scorned by Dr. Norton, needs further attention. I would like to discuss an aspect of this proper concept other than that concerned with taxation which was raised by Dr. Burton, namely, the analysis of interest in relation to the origin of co-operatives. Co-operatives do not receive positive profits in the long run, any more than any other firm does. Profits are unimputable, functionless, unearned, unaccrued income which the economic firm owner receives by being in existence in a dynamic economy. The profit may be positive or negative, but over a long period averages zero. On this basis the incentive attracting potential members to a co-operative would be expected to be the returns from scale or monopolistic competition referred to above.

The nature of a co-operative, however, differs from that of a shareholders' proprietory firm in the influences of changes in short-term profits received on the valuation of equities in the firms. While the

prospect of zero economic profits cannot be regarded as an incentive to the formation of co-operatives, the prospect of being able to use positive profits when they do accrue in the short period in a particular manner may be expected to act as such an incentive. Continued existence of firms depends upon an ability to live through periods of negative profits. Co-operatives gain added strength because members can accept lower returns on equity in such periods without transferring them to a future period of time, an obligation to make up this deficit in interest. Thus when a positive profit accrues to the firm, the co-operative can allocate this surplus for further expansions, whereas the private firm is obliged to pay dividends to preference and other shareholders to make up for low yields in the past.

Thus when the co-operative makes no profit, the existence of alternations of negative and positive profits over time, and the institutional arrangement for its distribution, makes profit incentive an important one in the formation of co-operatives. Stated in other terms equity valuations change in proprietory companies, but remain at list price available for sale in a co-operative. Thus the desire to constitute an economic firm, rather than to remain a capital owner, is an added incentive to the formation of co-operatives. I would like to ask Professor Ashby, if he has an opportunity to reply to this discussion, whether he would agree with that comment. A desire to constitute an economic firm rather than remain a capital owner is an added incentive to the formation of co-operatives despite the mention he made of profits.

Professor Ashby referred to the working funds of co-operatives as not being capital. Perhaps part of what he stated may be expressed by saying that it is a creation of a firm rather than the securing of capital yield that the members seek to achieve. The origin of the co-operative then appears as a threefold basis; a desire to secure large-scale economies, monopolistic practices, and to establish an economic firm. In many cases the movement begins with the dissatisfaction among the members about existing facilities, and this is an important difference also between the origin of co-operatives and other firms. Within the field of taxation policy involving distribution of the share of income acquired there is a gap in the theoretical framework, but the taxation policy designed to favour co-operative developments means a greater comparative share to members of co-operatives as compared with private-firm owners. The latter usually own more capital wealth than do co-operative members. If fair distribution of income is accepted as a goal then a taxation policy favouring co-operatives is a step in that direction. Similarly,

the effect of the taxation rates on the value of capital, that is, on wealth, would depend on whether the tax income was a quasi-rent or a share profit, or interest on the co-operative members' equity. Taxes on equity yields would reduce the asset value, and if the tax differential between co-operatives and non-co-operatives is such as to be important at the income level where only normal interest is being received, then co-operative members receive a benefit which may be reflected in asset valuation.

A. DATE, *Rural Bank, Sydney, N.S.W., Australia*

The Chairman has said that two Australian speakers running is most unusual, but the spectacle of two Australians running *between wickets in England* is by no means unusual!

Two previous speakers have dealt with the progress of co-operatives in Australia and it is therefore unnecessary for me to add anything further at this juncture, except to endorse what has been said. The progress of co-operatives in the State of New South Wales has followed much along the lines discussed by the representatives from South and West Australia.

A most significant point to me was the fact that almost the last words of Professor Ashby's address were to the effect that those who fear collectivization should embark on some form of co-operation. That is, I think, a fair précis of what he said. The opening remarks by Professor Visocchi were a quotation from Keynes: 'Co-operation was the only way in which the working classes could share in the advantages of modern progress.' These two statements together carry a very important message, and I would like to analyse them a little further. The underlying assumption in each is that the problem of 'management' is capable of solution. The majority of delegates to this Conference will be conversant with the thesis of James Burnham in his *Managerial Revolution*—a thesis to which there was quite a deal of substance. It has a special application to this subject of co-operatives. Look at the problem squarely and objectively. Under any form or system of government it is the managerial personnel in the key positions of administration who exert considerable influence and power. The manager can be a bureaucrat; the manager can be a capitalist; the manager can be a commissar; or, as the alternative suggested to us by Professor Ashby, the manager can be a unit in itself known as a co-operative.

All organizations require to be run. A safe maxim is that no business ever runs itself—no department ever runs itself—and no co-operative will ever run itself. In the co-operative movements in agriculture, in

dairying, in the grape-growing and wine-making industry, in co-operative marketing schemes, the problem all too often revolves around the selection and retention of a first-class manager. He must be a skilled man who combines in his personality, in addition to all the business acumen demanded of a capitalist entrepreneur and for the running of a large-scale business, a strong vein of idealism and an even stronger grain of integrity of an order which is rarely found in our present state of society. I gathered the impression that this was the factor Professor Norton had in mind in his concluding remarks, though he did not have time to develop it further.

The co-operatives have often suffered a disadvantage not because the principles of co-operation are in any way unsound in themselves, but because the search for the right type of manager and the personnel to work with him not infrequently presents problems of extraordinary difficulty. There is an ever present temptation in capitalist enterprise to defeat competitors by 'buying' key men; not by bribery, though of course that cannot be ruled out, but by direct and legitimate inducements to accept other appointments. In the case of a successfully functioning co-operative there is an added reason for all proprietary organizations to concentrate on this way of defeating a type of competition which deprives them of profits. The co-operative in turn is, by its constitution, somewhat more vulnerable in this respect than an ordinary capitalist enterprise. There is a basic conflict in the co-operative organization in that the need to pay higher and higher salaries to retain competent managers is opposed to the fundamental principles of distribution of profits among members of the co-operative whose net incomes as producers may not approach the rewards to their paid executives. String-pulling and wars 'behind the scenes' go on between co-operative and proprietary organizations both in the matter of personnel and purchase of essential supplies just as major capitalist organizations resort to all sorts of practices and hidden pressures—and often on governments—in an endeavour to gain a business advantage. If you follow closely the history of industrial co-operatives, you will find many examples of the type of activity to which I have referred. Those of you who have had any active part in the running of a large-scale business organization will appreciate its significance.

The principles of co-operation as discussed in the two papers presented to us tie up with the concluding comments I made on the problems of peasant farming. You may recall that I stressed this very factor of co-operative activity, so do not deduce from what I say now that I am opposed to the principles. Sight must not be lost,

however, of the fact that in this desire to make the best of two worlds—to defeat the threat of collectivism on the one hand and on the other to ensure for both producers and consumers the full benefits of co-operative activity not normally available through ordinary capitalistic or profit-seeking enterprise—success rests very strongly on selection and retention of personnel, and this demands in turn the acceptance, by both members of the co-operatives and their managers, of ethical principles and an idealistic outlook which have been all too noticeably absent from our society up to the present.

V. VISOCCHI (in reply).

There are only two points raised in discussion which seem to call for an answer from me, one by Dr. Burton and the other by Professor Norton.

It appears that Dr. Burton understood from my paper that I was advocating for co-operative organizations some sort of monopolistic position. There is a slight misunderstanding here. I did refer to monopolistic positions forcibly acquired in one period by co-operative organizations in Italy, owing to the particular events which I tried to illustrate. I did not, however, express approval of it and I now wish to state explicitly that I agree with Dr. Burton when he says it should be avoided. Probably the same basic reason makes me disagree with those who advocate the establishment of a co-operative commonwealth, though I believe that co-operation may play a much more important role than at present in the safeguarding of our western civilization based very strongly on the correction and integration of our traditional system of economy.

Turning to Professor Norton, I would dare challenge anyone to find one single point of disagreement between what I said in my paper and what he said in his speech, except perhaps on one point where he stated that co-operatives should always maintain their independence from the State. If that means that co-operatives should not accept delegated functions on behalf of the State, then I disagree because, at least in European countries, events are increasing State intervention in economic activity and, in my opinion, there is a real danger if this intervention is done by inadequate organs. To avoid this danger it is necessary that the interested parties in each particular line of economy should take upon themselves the task of carrying out the State directives by voluntarily accepting delegation of State functions in some cases, for the welfare of agriculture and agricultural producers.

On the other hand, we all agree more or less that co-ordination

implies a certain amount of subordination. Therefore I cannot understand why co-operatives, even when they do accept State-delegated functions, should expect to remain completely independent. It appears quite natural to me that in this case the State should be allowed to control co-operative organizations to the extent implied in these delegated functions voluntarily accepted. Apart from this point, I agree with all Professor Norton said.

A. W. Ashby (in reply).

There are many points on which I would have liked to make further comment but I do not want to tire you. I shall therefore be brief. The statement which Mr. Williams has just made about the theory of profits applies to a meaning of the word profits which I was not using. If I ever used the word 'profit' in a general sense this morning—which I doubt—I used it with its ordinary accounting meaning: that is, the earnings of a firm without differentiation as to interest, or risk, &c. I was, in fact, careful to use the term 'co-operative surplus', or, as Mr. Norton uses it, 'co-operative savings', which has exactly the same meaning.

Unless one is clear about the nature of co-operative business, it is impossible to understand this question of surplus and its distribution or its final disposal. If we create a commercial firm as an independent legal personality, that firm makes profits or suffers losses. But suppose the President and I, being farmers, go to a manufacturer of fertilizers individually for 50 tons of fertilizer and have a particular price quoted to us; then, when we go back home and compare notes, we decide to return to the manufacturer with a request for a quotation for a 100 tons, on which there is a 5 per cent. reduction in price. That difference is not profit; it is a saving by mutual action. And if the President and Mr. Maxton and I and Professor Minderhoud do the same thing, exactly the same position arises. There is economic advantage in mutual action to secure savings, but that is quite different from profits considered as differential earnings. There is no 'profit' in mutual action to secure mutual savings because there is no exploitation of any other person or body.

During the discussion we have at times been confused about what we were originally dealing with this morning, namely, a theory of co-operative organization with particular reference to the relationships between co-operatives and the State. I was trying to state for the Conference a purely economic theory of co-operative organization. I did not for a moment get into the field of the economics of co-operative operation which, although not entirely different, to a

considerable extent is a different field. It is when we get into the economics of co-operative operation that we come up against the questions of what the co-operatives can do with prices and so forth. Co-operative operation and the initial structure of the organization are closely related but they are not one and the same thing.

Just perhaps one other point of a minor character. Dr. Schiller no doubt knows that there are very important experiences in co-operative and collective farming outside Russia, and, in particular, in Palestine and Mexico. These need study quite as much as those of Russia, because they are operating in entirely different environments.

If I had time the real question which I would like to discuss before this Conference is the question of what constitutes independence for the peasant or for the family worker in agriculture. Because of conditions, the concept of independence can vary so much from one person to another, from one local community to another, and therefore the content of independence varies. Quite frequently, when the co-operative or some other superior organization restricts the freedom of an individual in a particular direction, while increasing his leisure time or his income or both, then the gain in independence in personal choices, independence in a very real sense, is far greater than the loss of independence in the production unit, or than that in choices of occupational activity. That is just the briefest of introductions to an analysis of independence in the family farm.

The day's proceedings have brought together an interesting and useful collection of information on the condition of agricultural co-operatives in several countries, but we still need further study of relationships between co-operatives and the State.

# THE SPREAD OF INDUSTRY INTO RURAL AREAS

## OPENING ADDRESS

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ANYONE seriously approaching the question of the possible spread of industry into rural areas of the world is bound to be plagued by numerous difficult questions. Some of these will be questions of fact, some questions of what is politically desirable, and some merely questions as to whether one's prejudices are somehow being violated.

Long consideration of this whole range of material has brought me to the feeling that at any rate industrialization seems bound to happen in the places appropriate for it, that in those places it will be useless to try to oppose it, and that, therefore, it had better be done well. But I should have to admit that there are numerous subsidiary questions which need answers I am not prepared to give; nor, so far as I know, is anyone prepared to give them categorically. For instance, it will occur at once to ask, 'What are the appropriate places?' and even as to this there will be a previous question: 'What kind of industry?' This is to indicate that not every location is equally desirable for heavy or medium industry or, for instance, extractive industry. The only reasonable certainty, I think, concerning these subsidiary questions is that for every area of large population of considerable density it is of advantage to manufacture certain of its consumer goods and to fabricate, so far as possible, the raw materials it produces. Beyond that the questions become really puzzling.

Until contemporary times reasonably informed persons could feel fairly certain what the resources were on which basic industries could be built. That time is rapidly passing. So great has been the progress of basic research into energy and industrial resources that within the next few decades, over which any plan for industrialization must stretch, it seems likely that new sources of both power and materials will be opened. And it does not seem impossible that these may change the whole nature of the industrial process. Such fundamental changes will, of course, affect agriculture too in ways which, at this moment, are unpredictable; so I must be understood, I think,

to be discussing a question which is a strictly temporary one. What kind of industry may be extended to what kind of agricultural community is likely, within the lifetime of plans made in the present, to be quite a different problem than it is at present.

Nevertheless, the general progress of mankind towards better contrivance, towards the relegation of mechanical tasks to power-driven machines, towards specialization and social integration have, I believe, determined that industrialization—of some sort—will affect the production of foods and fibres more and more powerfully. The process will, as an incident to this productive revolution, affect basically the rural ways of life. It will reduce manual work, emphasize management and ingenuity, increase security, raise the levels of life—and, it may be, break up and refashion the rural communities to which our generation has become accustomed. It seems unlikely that opposition can greatly retard or advocacy greatly change this probable result, since the forces causing it are civilizational or cultural ones which lie outside the control of agriculturists. It is, however, possible and desirable, it seems to me, that the processes should be understood, and even forwarded, so that the transition may be hastened and the results shaped to a desirable pattern.

With the understanding, then, that what we are discussing is the desirability of deliberately extending industrialization, as we know it now, to the rural areas of the earth, as they are at present, but with a wary eye on the future, there are some considerations which can be seen to be relevant. For instance, it can be seen that the incidence of such an industrialization movement could fall in either of two ways. It could benefit an employing or money-lending class, the class which has so much initial advantage in any backward economy and, indeed, in almost any rural economy, except those few in the most advanced western countries where State or co-operative credit institutions are so far developed. Or industrialization may be carried out so that the benefits will accrue to those who must be acknowledged to need it most—the disadvantaged rural masses.

It could also conceivably be done (1) so that it gradually reduced the farming population, or (2) so that it supplemented farmers' incomes without reducing the population. It is almost inevitable—and has, I believe, always been historically true—that the former will be the result unless there is more careful planning and more drastic control than there has been in any known instance.

If, then, we accept for the moment the inevitability of the spread of industrialization and the result that the farming population will probably be greatly reduced, we shall seem to have arrived at one

general conclusion at least: there will have to be a very large shifting movement going on for a very long time out of the world's rural areas into its urban areas. This will cause very great dislocation and make the necessary readjustment such as to try the abilities of statesmen everywhere; but it is rather likely than otherwise to be favourable to the strictly rural communities, especially those now clearly suffering from overcrowding.

Something like three-quarters of the world's people live well or badly, as it may be, on the land and practise some kind of agriculture. As is well enough known to this company, there is an enormous difference between the different areas of the world in respect to the percentage of farming people in the whole population. In the United States it would be something like one-fifth; but in India, for instance, the percentage would be very much higher—in many areas, perhaps, nine-tenths. In a European country like France the percentage would be more than one-half. I call attention to these differences because the assumption behind a deliberately entered-on programme of industrialization for the world is that it is desirable to consider bringing the rest of the world into more or less the same percentage relationships of, say, the United States or of Switzerland. An industrialized world, in other words, would mean a world as highly urbanized as the West has already begun to be.

There are, as I have said, real questions, moral, political, and having to do with men's prejudices, whether entering on a programme of industrialization which will have these consequences is desirable. But if we assume for the moment that these questions have been answered in favour of industrialization, and ask how, if it is desired to do so, the programme of industrialization may be advanced, we come upon two rather distinct general problems: first, those relating to already advanced and partially industrialized areas; and, second, those relating to the backward or non-industrialized areas. For the first—the areas which have begun their advance towards industrialization—no 'outside' help is perhaps needed. At a certain stage, industrialization will have begun to produce such surpluses that a governmental organism will have been able to transfer enough surplus from one kind of activity to another so that the kind of objective which has been established may be reached. In the second—the non-industrialized areas—however, the problem will be to find the necessary surpluses to support a beginning and to reach the independent stage at which the self-feeding spiral of advance begins to establish itself.

To take the advanced society first (although already partially

industrialized societies are not in a sense the more demanding for our purposes here) the objective will have been rather sharply defined. That objective is, logically, (1) complete urbanization, that is, to make all social life centre in the urban community; and (2) the industrialization of agriculture itself. I think this follows, although I realize that this is a consequence which may be disputed. Nevertheless, I do not see that agriculture may be immune from the prevailing cultural influences in the community in which it operates. Agriculture can be seen, in the United States for instance, to be ceasing to be exclusively known as 'a way of life' and is becoming another category of production like any other class of commodity. This is not a generalization which is universally true and it probably never will be universally true. There would always be, perhaps, areas where the old rural ways of life could be kept and the old virtues cultivated; but, in the sense of being important contributors to the gross product of agriculture, their old importance would be lost.

To pursue this thought for the moment, the aim of a backward or non-industrialized society, which wishes to establish the standards of quantitative production and to raise its levels of living to those of the industrialized areas, would necessarily be to establish those minimum conditions upon which the autonomous spiral of industrial advance can be supported. The foundation for this self-supporting evolution towards industrialization was found in the United States in vast empty lands and unexplored resources. It might, I suppose, equally well be found in the artificial establishment of those minimum conditions of well-being for farmers and workers out of which such a beginning spiral might spring. That is obviously the rationale of President Truman's announced programme of assistance for backward areas and of the recent report of the Secretary-General of the United Nations outlining a beginning of such assistance.

I should like to make the point that the methods in the two instances must be quite different. The advanced industrial society moves towards integrated organization, towards institutional relationships (such as farmers' and workers' organizations and their recognition by government), and, generally, towards that close integration which is so characteristic of industrialized society. In order to do this it establishes minima, and methods for securing them, so that all members of the community may be active participants in its decisions and activities, and so that established reciprocal relations may be matters of conscious adjustment and may not be ruptured easily by accident or by circumstance. Such established and protected reciprocality is for the purpose of maintaining an active going community.

This is the process, I think, that can be seen to be the objective towards which most western countries are well advanced.

As part of a whole scheme for integration it has sometimes been proposed—and in a few instances attempted—to found industries or branches of industries in otherwise rural areas. There are great difficulties in such an effort and, lacking some special advantage, it has usually not succeeded. The reason for doing it owes its origin to a desire to arrest the decay of a rural community or to supplement its agricultural income. But industries have lives of their own. They need to be efficient, and this requires that they be fixed in an industrial milieu where the labour force is single-minded, the management severely practical, and so on. The rule economists long ago rooted out in the location process is that people move to industries, not industries to people. And a reversal of this rule does in fact encounter difficulties which are far from imaginary. The idea of such a scheme is not to begin the building-up of a visible industrial complex as would be the case in a backward area, for which appropriate allowances would be made over a developmental period, it is rather to set up an island in an otherwise rural area, to emphasize and maintain its ruralness, rather than to transform it. And this is a paradoxical effort which will almost certainly succeed only with permanent subsidy. The subsidy may be judged to be worth while, but it ought to be recognized clearly for what it is.

It is the problem of the backward or non-industrialized areas to reach a level at which the process of integration and industrialization can begin. When I spoke of the establishing of minimum conditions for farmers and workers I had in mind an implication running a good deal beyond a certain amount of international relief work. As a matter of fact, it is quite clear that, although it is necessary to banish famine, and even to establish world-wide immunity to hunger, the spiral of advance cannot be established on such bare minima. It can only begin when there is available a massive infusion of technical services and of capital. The surplus to support such an effort can and, in some instances, has, come from some fortuitous circumstance within or from outside. The fortuitous circumstance might be the possession of a much-needed raw material, saleable to the more advanced areas. Arabia, for instance, possesses oil and that oil is saleable. It can be used to transform Arabia into a very different kind of area. The real doubt whether such a transformation actually will occur illustrates one distinction I have been trying to make here—whether industrial advance is to be used to benefit the *élite* or to transform a whole social organism. Palestine offers a ready illustra-

tion of another sort. She has begun what seems an almost magical transformation, depending almost altogether on imported capital and sheer expertise. She had almost no resources. Russia, of course, when she began her transformation in 1917, had enormous potential resources; but she also had the will to change. And she had little but opposition from without. Nevertheless, she had some aid and she borrowed ideas and expertise very freely. As we can see, aid from without may be of numerous sorts, may be extended for very different reasons, and may be used for very different ends. It depends on the objective; it depends on who is consulted; it depends on the determination to seek the transformations inherent in industrialization.

As a matter of fact, this aid from without is a matter for very serious consideration at present, especially among more advanced peoples. The impulse to aid others, to lift their living levels, to bring them into the circle of highly organized areas, rests fundamentally on the perception that the world is now too small for safe division into haves and have-nots. For the have-nots will be envious and the haves will be—and, what is equally important will *feel*—insecure in their possession of privileges. It can, of course, have other origins not nearly so noble, among them the private investment of capital in the hope of profit which we used to call 'capitalistic imperialism', or even the need to export capital and create a market in order to support the western economies, since they have by no means reached that degree of internal reciprocality necessary to a permanent high-energy functioning, and often prefer to export surpluses rather than to invest them at home or to eliminate them by more equitable distributive measures.

These three are, perhaps, the more usual impulses: (1) to reduce envy and increase security; (2) to find profitable investment; and (3) to dispose of surpluses or to create markets. But there is, in addition, that genuine philanthropic impulse which actuates many people to the extent, even, of influencing governmental policy, and which has played, besides, so large a part in the initiation of certain private attempts to set going the spiral of advance in backward areas. The Rockefeller International Basic Economy Corporation with its operations in Venezuela and Brazil, and the Liberian venture of Messrs. Stettinius and others, are examples of this impulse. In this connexion I suppose I should also mention the desire to advance the interests of associated people such as are to be found in the modern empires or commonwealths. This is modified to a certain extent by a lingering colonialism, but there is no doubt that there has been a change in recent years. I should cite the Colonial Development and

Welfare Fund of the British Commonwealth as an illustration of this last. But there is, finally, also the possibility already mentioned—that the equalization of technical ability and the extension of certain welfare services may be a major activity of the United Nations, and even, perhaps, that its fiscal agencies, the Bank for Reconstruction and Development, for instance, may be the way of extending the capital necessary for the industrialization of backward areas everywhere.

However it is done and whatever the source, there are certain techniques for assisting non-industrialized areas with which there has by now been a good deal of experience; and conclusions from this experience may be examined.

In seeking to establish the foundations for industrial advance, it seems obvious that a very wide base must be built. This means that agriculture must be put on a firm foundation and industries must be begun, even if in a small way, on the most efficient pattern. The aim may be to urbanize, to reduce the agricultural population, to specialize, and to industrialize; but these objectives lie at the end, not at the beginning, of the spiral; and the end must be accepted as one which is a long way off in time and for which there must be careful and patient planning and social management. There must, for these purposes, be capital in amounts relevant to the particular instance. This capital may be indigenous or it may be loaned by an outside agency. But, from wherever it comes, its use must be a carefully directed use. Loans must be for specified projects and must be supervised to see that the capital is used for the purported purposes.

The loans for agriculture and for small industry may well be of the 'rehabilitation' type. For this purpose, the farm-and-home or shop-and-home plans with which we have become familiar in the United States, in our rehabilitation efforts, are perhaps as well conceived and as well worked out as any. Beyond rehabilitation, there will, at an appropriate time, be need for larger-scale capital expenditure. These will be for such adjuncts as research and plant improvement, for irrigation and drainage schemes, for power production and flood-control, for the establishment of co-operatives, for vocational education, and for many other such undertakings. These perhaps can be said to be the necessities of the secondary stage of advance. At any rate, it is only on the basis of such a foundation that the spiral of industrialization can seriously begin. Until then there will not be a market to absorb the commodities which are to be manufactured or a labour force with the necessary minimum of training—the possibility,

in fact, of subsidiary and complementary developments without which an industrial system can never begin its evolution.

The first industries to be attempted may be of two sorts which will have some advantage: (1) the provision of cheap goods to be consumed at home—textiles, footwear, foods, and building materials; or (2) the processing of locally produced raw materials so that the values added to them by manufacture may help to build up the local economy. And here I should like to say quite categorically, and on the basis of some experience with this kind of attempt, that, except for unskilled labour, the first industries must be operated by imported personnel which may only gradually be replaced by local technicians trained in vocational schools associated with the industry. The experience is quite conclusive, I think, that young people of the range of age from fourteen to eighteen must be thus trained. Mature workers cannot, in general, be successfully readapted from primitive agriculture.

Perhaps the most effective means for beginning this industrial programme is to persuade existing organizations, in already industrialized areas, to undertake management and training contracts in areas ambitious to have a similar development. This has, as a matter of fact, been done in textiles, with tobacco and sugar products, leather products, and other similar products. Sometimes it works well. It is possible to say, also, that it is extremely desirable to accompany such imported 'know-how' with a programme of training in vocational and engineering schools, and experience in the factories, of the advanced countries. Selected personnel will usually be accepted and can be returned as teachers or as industrial leaders.

Another method sometimes thought worth while is the use of various persuasives in order to induce industries to extend branches to less advanced areas. For this, tax remittances are available, as are sharings of risk in various ways, such as making loans, building of plants for lease, and so on.

But industries, on their own initiative, especially ones of a certain sort, will often be attracted to backward areas by low wages or other favourable labour conditions. It is perhaps not necessary to say that when this kind of competitive advantage seems to be the attraction, no great contribution to a general programme of industrialization can be expected. Industries attracted by the prospect of establishing sweatshop conditions will not assist in the basic training necessary and will be likely to move away at the faintest suggestion of regulation or control.

It is perhaps important to note also that, in the past, backward

areas have been kept backward, at least partially, by policies adopted in the more advanced areas with which they have had relationships—policies which sometimes have seemed to have little connexion with such a result, but which actually do. It is notable that many of the programmes looking to self-sufficiency among the nations of the West have had this definite retarding effect. An illustration, which comes to mind, is the subsidizing of beet sugar in the temperate zones and the prohibition of sugar refining or processing in the producing regions. And this same thing has been true of tobacco, of vegetable oils, and of other products which might very advantageously have been processed in the growing regions. This policy has been especially harmful throughout the tropical and semi-tropical regions of the world. The nations of the temperate zones have been governed in such matters by home politics as they would not have been if the colonial areas had had some sort of representative in policy making.

There is a further consideration here to which reference will have to be made, for purposes of completeness, although in my opinion it is doubtful whether it has much importance. Handicraft industries are often put forward as useful in backward economies and it may well be that, under certain specific circumstances, they are. But there is undoubtedly a tendency for them to decay immediately when the economy comes into intimate contact with an industrialized society. If there is any way to acquire the purchasing power, consumers will purchase machine-made goods in preference to handicrafts. Handicrafts are thus more useful as exports than as home consumer's goods, and on this basis their utility is extremely doubtful. Handicraft processes are so extremely inefficient that the resulting goods can seldom command prices which yield anything like a defensible wage. When definite contact is made between a backward and an advanced area in this respect and the capital can be found, it is, I have come to believe, better to introduce the most modern factory methods even though the industries to be begun may be small. It is often argued that not so much *work* can be obtained in this way; but surely the objective is not to make work but to produce income. If the income does not flow outside the economy and have its effects in that way, it can be used for welfare or productive purposes with greater net effect than would be yielded by the extremely low wages characteristic of handicrafts or of sweated industries.

The truth is that there is no general escape from the on-going process of industrialization in the modern world except in unusual circumstances and in restricted areas unless the corollary of low

standards and relatively primitive life are accepted. The pre-industrial economies were and are of a kind which will not be tolerated by those who become aware of the possibilities in improved productive techniques. It is too easily seen that only by the use of power and machines, of paper work and planning, of capital and management, can foundations be laid for the improvement of health, housing, and other welfare institutions which people to-day demand. In no other way can the surpluses be built up which can support such advances. That there are serious political, economic, and perhaps, psychological issues involved, there is no doubt. Even if the capital can be found and the technicians can be sent in generous number and the machines necessary to carry out such programmes can be provided in one instance after another, there will be resistance and difficulties. This is a time of delayed nationalism. The more advanced and industrialized nations have been self-governed (at least nominally) for a long time, sometimes for centuries, in any case, for many decades. But many of the non-industrialized areas are only just coming into the possession of their political sovereignty. They have a desire, which all peoples have had at some stage, to exaggerate the importance of a principle for which they have striven for so long and made so many sacrifices. And non-industrialized areas which have long been independent, such as, for instance, the Central and South American Republics, but have remained backward in this respect, for some reason, have developed dictatorships and governing classes of *élite* who have in many instances no real desire to better the conditions of those whom they are now able to exploit if it will in any way lessen their hold on the economy and the Government. So even the most sincere attempts to extend aid from the advanced to the backward areas must contend not only with the sacrifices necessary to dispensing capital and expertise with no return except in a better-adjusted world, but also often with resistance even from those areas to which they would extend help.

It will not be of the slightest use to give or to loan surpluses to backward areas without administering them. They will be wasted from inefficiency or from the corruption which is characteristic of dictatorships. But then, again, supervision is likely to be interpreted as interference with the precious newly gained sovereignty or as a threat to the privileges of a governing class. There are difficulties either way.

The only method for overcoming these difficulties—or at least part of them—seems to me to be the extension of aid and supervision by an international agency which cannot be suspected of imperialistic motives and which can consequently not be resisted by a selfish

*élite*. There are, of course, exceptions. One would be furnished by the operation of the Colonial Development and Welfare Fund of the British Commonwealth which I have already mentioned. Since the colonies are now part of the same political system as the Commonwealth and there is no question of imperialistic motives, there ought not to be such great difficulties either in extending or receiving assistance. For another example, there has been undoubted value in the extensions to South and Central America of capital and technical aid furnished by various branches of the United States Government. Frequently as that has been wasted or appropriated by a governing class, there still has been some gain in health and welfare. So that unilateral assistance has at least sometimes to be judged to be useful and acceptable. It does not, however, go very far, and is accepted in most instances with some suspicion. These are perhaps the reasons why the Americans took the lead in requesting the report issued recently by the Secretary-General of the United Nations on technical aids to backward areas.

It has seemed clear to me for some time that, whether desirable or not, there is a technological imperative which requires industrialization, in more or less degree, of the whole world because there is no other way of approximating the standards of life so generally demanded at the present time and because, in any case, industrialization is a cultural mode of the whole civilized complex. But that there are better and worse ways of approaching the problem as well as more and less efficient ways, there seems to be no doubt. I am hopeful that studies of these various methods, and experimentation with them, may be one of the major efforts of the United Nations in the coming decades. It might well be the most practically useful one it may hope to carry out under present circumstances.

M. TOFANI, *The University, Florence, Italy*

In the main I agree with the observations made in Professor Tugwell's paper, but when they are applied to Italy certain of his observations require a number of reservations. In particular, there is his point that in regions where there is already industrial development, the industrial development is bound to change radically the economic and social structure of the regions. Some reservations would be needed also on what he said about the employment of labour. In this connexion I would ask you to recall Professor Medici's paper on the first day of the Conference, which, it seems to me, was not too clearly understood by many of the speakers who took part in the discussion. But I will not take up that point because I believe

that industrial development in depressed and over-populated areas in Italy is a problem which is related as much to the development of capitalist agriculture as to the development of peasant agriculture, and although the latter has always predominated in Italy, the former is of considerable importance also.

I would like to spend a little time on two points: one a strictly economic one, and the other perhaps more of a social or moral or psychological character, but which in reality is basically economic. The first point is simple, and it will be sufficient just to indicate it in a few words. What does industrial development in these over-populated and depressed areas imply? In addition to absorbing the exodus of the excess rural population to the city it implies the growth of markets, and the fact I wish to stress is that with the continued intensification and development of these urban centres markets will be created which agriculture, whether it is peasant or capitalist, needs badly and will have to adjust itself to supply. I cannot offer you factual evidence of this, partly because there is not time and partly because, unfortunately, in Italy painstaking and profound studies on this subject are lacking. I shall refrain from giving even specific examples, although in this country of ours there are very many such examples, inasmuch as practically half the communes throughout Italy, at all times right up till to-day, could provide outstanding examples of this point.

The second point I want to make relates to an anxiety which is not referred to in any way in the paper we are discussing, and I believe it is completely ignored by all our colleagues from the New World—from America, and in particular from North America. It is, however, an anxiety to which agricultural economists in European countries and certainly in Italy have given considerable emphasis. Some people, sincerely persuaded of the high moral value of rural life compared with urban life, fear that with the dwindling proportion of the population reared in a rural environment which inevitably accompanies industrial development there will also be a loss in the population as a whole of that fresh energy and high moral quality which is a peculiar characteristic of country people. They fear above all that the political life of the country will become dominated by the urban centres, and not merely by urban centres but by speculators, by people without scruples, who may debase the political actions of the State in their own personal interests.

This anxiety, I feel, should not to-day be given excessive emphasis by our colleagues from the Old Continent. In the first place, one has to admit that unscrupulous men exist everywhere, even in rural

localities. But in addition we are completely convinced that we are going to have to introduce, even in Italian rural districts, new modes of life which are bound to be very like, if not identical with, those of urban centres. The patriarchal structure of the family, which dominated all European agriculture right up to the last century, is a thing of the past, together with the capitalist country gentleman, who regards the land as a family heirloom and who feels himself bound to this land and to his agricultural business by bonds which are more emotional than economic.

My directness of speech is perhaps not pleasing to some, but we must have frankness if we want to achieve sincerity, and if our studies and our activities are to help agriculture, and above all help it to achieve economic conditions which will give to farm life and to rural life generally the same standard of well being as is enjoyed by those in industry and commerce.

L. H. BEAN, *Office of the Secretary, Department of Agriculture, Washington, D.C., U.S.A.*

It has occurred to me that this Conference ought not to go down in history subject to the criticism which Mr. Playfair made of Adam Smith back in 1821, when he wrote a booklet on agricultural prices. In that booklet, discussing prices in the depression of those days, he refers to a tabulation that Adam Smith included in *The Wealth of Nations*, and points out that Adam Smith had come to the wrong conclusion on the basis of those facts. He added that if Adam Smith had merely presented the price record in the form of a chart everything would have been clear at a glance. My intervention on this discussion will make sure that no Playfair arises in the future to say that this Conference terminated its successful sessions without the use of one single chart!

But I have a more serious reason for my intervention, namely, to add some factual support to the belief which some of you have expressed in the need for more and more industrialization practically everywhere. And the facts that I have before me turn out to be a fair sequel to Dr. Tugwell's paper. If he had undertaken to attach to his paper a statistical appendix, the material I have here would have been appropriate.

With your permission I would like to read five paragraphs and present two charts from a chapter on 'International Industrialisation and Per Capita Income'.[1]

[1] 'International Industrialisation and Per Capita Income', by L. H. Bean, Part V of *Studies in Income and Wealth*, published by the National Bureau of Economic Research, Inc. 1946.

'The course of industrialisation has been speeded up almost everywhere by the war [please remember this was written in 1943–44] and will certainly engage attention more and more after the war. If we get the kind of peace and international economic co-operation we are fighting for, the future course of industrialization in various countries is quite likely to be molded more consciously than it has been in the past. To that end much more basic data on national income by countries are needed, but even the data at hand, despite their known shortcomings, may be made to reveal certain broad features in the relation of industrialisation to per capita incomes that should be useful guides to economic programmes. In this paper the different effects on per capita incomes that may be expected from expansion in primary, secondary and tertiary industries, are examined. With few exceptions living standards may be expected to rise and world trade to increase as the inhabitants of more and more agricultural countries go into secondary and tertiary occupations; also, with few exceptions such as in our Southern States, the greater the emphasis on trade and services as compared with manufacturing, the greater the rise in per capita incomes. . . .

'In every region, whether highly agriculturised south-eastern Europe, China, India, Africa, Latin America and Southern United States, or the highly industrialised areas of Western Europe, and North Eastern United States, per capita incomes are larger where the proportions of the labour force engaged in agriculture are lower; and, practically everywhere, economic programmes providing for readjustment out of agriculture are called for. China, India, many sections of Latin America, Africa, Eastern Europe, and South-Eastern United States, are obviously over-agriculturalised, i.e. 60% to 85% of their inhabitants are engaged in producing food and other farm products.

'The low per capita incomes of China and India, it may be expected, could be doubled by shifting no more than 15% of their labour force from food production to other pursuits (with more efficient use of human and natural resources). An additional shift of less than 10% would treble them. The low incomes of Roumania and Bulgaria could be doubled, if less than 20% of the labour force were directed into non-agricultural pursuits. Even in the largely industrialised country such as the United States of whose working populations less than a fifth is now engaged in agriculture, there are over-agriculturalised areas.

'About 800 million of the world's present population, 2,200,000,000, are classed as gainfully occupied; of these, probably 500 million are engaged in agriculture. If, in the course of a reasonable period, say the first two decades after the war, through appropriate regional programmes, including those to increase agricultural productivity, it were possible to alter the world's agricultural–industrial balance so that 40% were engaged in farming instead of over 60% as at present, the general gain in productivity and income and living standards would be enormous. If the United Nations took full advantage of the post-war opportunity to raise living

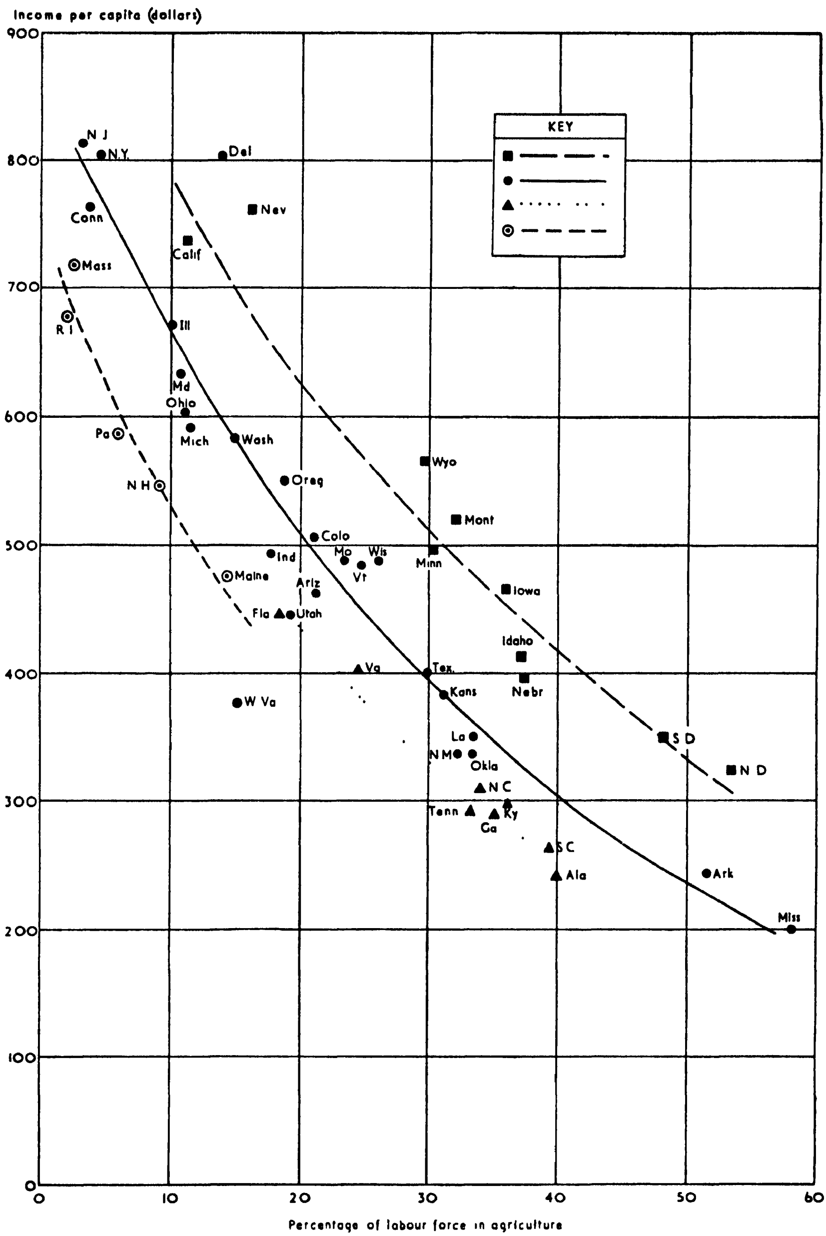
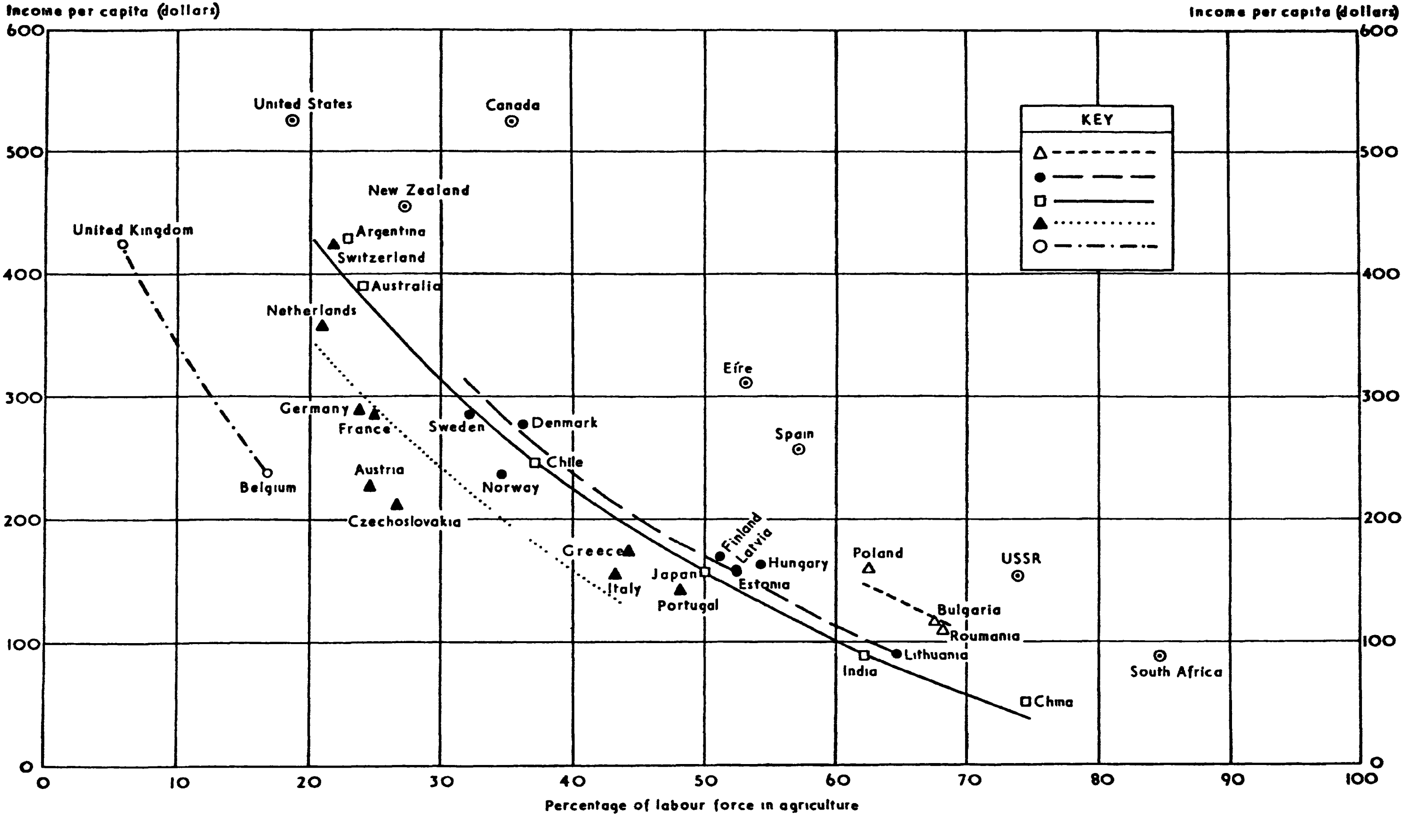



FIG. 1. Percentage of labour force in agriculture and *per capita* income of total population by States, 1939

standards throughout the world, over 150 million persons in the present world population could quit farming, while the remaining 350 millions increased their efficiency.

'To determine the ideal balance between agriculture and industry, both economic and sociological factors must be considered, but as far as economic evidence is concerned, there does not seem to be any definite indication that the reduction in agricultural pursuits can go too far, if countries can draw from the agricultural products of other areas. England and New England are cases in point. England, where 6% are in agricultural pursuits, imports more than half of its food requirements. New England States, such as Massachusetts, Connecticut, and Rhode Island, where fewer than 3% are in agricultural pursuits, get practically all their food supplies from other States. It is possible at some point, too large concentration in non-agricultural secondary industries (such as fuel mining and textiles), tends to reduce per capita incomes, and calls for a further readjustment towards tertiary pursuits. However, evidence from all over the world (except perhaps Australia and New Zealand where productivity in primary industries is greater than in secondary and tertiary), shows that the lower the proportion in agriculture, the higher the income.'

At this point I would like to turn to the figures to make what I have just said perhaps a little more clear. The data that I want to present are of two sorts. One has to do with the proportion of the working population in agriculture. The other has to do with *per capita* income of the entire population of a State or country. I am dealing not with the *per capita* income of farming, but rather the *per capita* income of the entire population in an area—and please bear in mind that it is a rule that farm income and non-farm income tends to rise and fall together, varying in degree. If the *per capita* income of an area rises and falls, you can be pretty sure that both farm income and non-farm income have done likewise. Fig. 1 has to do with this relationship between, shall we call it, the stage of industrialization for several of the States in the United States. You can look upon these States, I think, as 'countries' in North America. We have forty-eight 'countries' in the United States, and I am presenting here the income facts for several of these States. Across the bottom of the chart you have figures from zero to 60. These represent the proportion of the working population in agriculture. On the left-hand side of the chart we have a scale of *per capita* incomes, which vary from $800 down to $200. There are four lines which run down through the chart. The upper line represents the course of the relationship between the proportion of the population in agriculture and the *per capita* income of several north-western States. I shall name them: Nevada in the far left-hand corner,


Income per capita (dollars)
Income per capita (dollars)
600
500
400
300
200
100
0
0
10
20
30
40
50
60
70
80
90
100
Percentage of labour force in agriculture
KEY
United States
Canada
New Zealand
United Kingdom
Argentina
Switzerland
Australia
Netherlands
Germany
France
Sweden
Denmark
Chile
Austria
Belgium
Norway
Czechoslovakia
Eire
Spain
Greece
Italy
Japan
Portugal
Finland
Latvia
Hungary
Estonia
Poland
USSR
Bulgaria
Roumania
Lithuania
India
South Africa
China

Wyoming, Montana, South and North Dakota at the lower end of the upper line. Notice that you have there a fairly reasonable-looking statistical law, namely, as the proportion in agriculture increases the income in these areas tends to be lower and lower; or conversely, for higher degrees of industrialization, going from the low level of industrialization in North Dakota to the higher level in Nevada, there is a rise in income.

Please note that the income data are for the year 1939. If you are concerned with current values I would suggest that you consider the scale of dollars, about two and a half times as large to-day as in 1939; but all I want to leave with you is an impression rather than actual absolute fact. Now if you will please take a look at the two lower lines. The States represented by these relationships are Massachusetts at the extreme left-hand side of the chart, Massachusetts with a *per capita* income in 1939 of about $700, industrialized to the extent of only 3 per cent. in agriculture and 97 per cent. in other industries, and, in the lower right part of the chart, Alabama and South Carolina, 40 per cent. in agriculture and *per capita* incomes of only about $250.

Between the upper relationship representing certain north-western States and the lower one representing New England and the south lies the relationship for all the other States in the central regions. In each of these four sections of the United States the common rule holds good—the lower the agricultural proportion the higher the *per capita* income.

At this point I should like to indicate how to differentiate between these two levels of income by referring to the difference between the 'stage of industrialization' and the 'pattern of industrialization'. If we consider this broad relationship between the proportion engaged in agriculture and income as standing for the stage of industrialization, then the higher level of income might be considered as representing the effect on income of the different phases or different patterns of industrialization, and by pattern I mean the different types of farming and non-farming industries, say in Montana, as compared with those in Virginia or South Carolina. For the same stage of industrialization in two different regions incomes may and do differ because of differences in productivity, size of farming or business units, amounts of capital and labour, &c.

In Fig. 2 we have essentially the same type of relationship, but instead of dealing with States in the United States we deal with countries. Note at the left two points, one marked U.K. and the other one Belgium. I would like to point to four other countries, slightly to the right—the Netherlands, Germany, France, and Italy.

Note next the points for Sweden, Denmark, Finland, Latvia, Esthonia, and Lithuania. The same kind of law that we found for the United States prevails here also. The greater the proportion in agriculture the lower the *per capita* income of a region. Here also are different levels of income for the same stage of industrialization, and I suspect that the same basic explanation would hold here as for the United States, namely, that in addition to the influence of the stage of industrialization there is the influence of the different patterns of industrialization, the different combinations of primary, secondary, and tertiary industries, and their differences in the use of capital, labour, and management. This figure, dealing with countries, includes comparable data for Latin America (Argentina and Chile) and Pacific countries (Australia, Japan, India, and China). It is striking, at least to me, that whether you compare central European countries or South American or Far Eastern, essentially the same simple relationship stands out. Everywhere the larger proportion in agriculture is associated with lower *per capita* income.

Perhaps that is all I need to do with this basic material on this occasion. I hope that those of you who have the opportunity to discuss the problem of whether there should be more industry in relation to agriculture will examine the basic data in this manner. I hope those of you who have occasion to improve on or develop income information will make an especial effort to secure income data by regions and by provinces; and may I add in conclusion that I hope that the data can be presented or boiled down to some such simple relationships as I have shown here. It is far too over-simplified for the technicians, but for most of us who represent the 2,250,000,000 people in the world, this simple formulation of very complex economic data is particularly helpful. It should serve to stimulate action on the part of governments and administrators at the same time that it calls on technicians to provide better data and more comprehensive economic analyses.

L. Loewe, *Anglo-Palestine Bank*, *Tel Aviv*, *Israel*

In the text and in the charts which Dr. Bean has presented to us account is taken of the variations, as between one country and another, in the proportion of rural population to the total population, but not of the variations which exist within the rural economy itself between one country and another, and between one region and another in any given country. The rural economy is not a homogeneous concept. For instance, when we look, on the one hand, at the rural economy of China and then, on the other hand, at the

rural economy of the United States or Canada, there is a world of difference between them.

It is the amount of labour and the amount of capital per acre which principally determines the level of income per head. This is the background against which to view the vast differences in income per head which exist between one country and another. In China the coolie operates on an extremely small holding, and he has available only a very small amount of capital. In order to live at all, therefore, he has to apply a very great quantity of labour per acre so as to achieve maximum production. It is for that reason that the income per head in the Chinese rural economy is so very low. In the American rural economy, on the other hand, the farmer, especially in those regions where the ratio of rural to industrial population is low, cultivates and sows a very large area; and, in addition, America being a rich country, he has a large quantity of capital available. In these circumstances the agriculturalist is able to achieve a very high income per head.

But that does not imply, as Dr. Bean asserts, that the lower the proportion of the population engaged in agriculture the higher the general level of income per head throughout the population. Rather must one examine the differences in the income per head *within the rural economy itself*, as between one country and another, and then one will find that these differences are at least as great, and probably greater, than the differences which exist between the incomes per head averaged over the entire populations of the various countries.

When Dr. Bean says something to the effect that one cannot go far enough in reducing the proportion of population engaged in agriculture, he is saying something which cannot be denied. This is the typical utterance of someone belonging to a country which controls extraordinarily rich natural resources and whose density of population is extraordinarily light. If a country is going to be able to provide itself with food and, further than that, to have a surplus of food to export, and at the same time it is going to have a small percentage of its population engaged in agricultural pursuits, then it must have available a large area of land per agriculturalist. When these conditions do not exist then the conclusions of Dr. Bean will not follow. Instead of saying that countries which do not have a sufficiency of foodstuff themselves should, via a freedom of international trade, import these from countries with surpluses, one could formulate equally reasonable demands along the lines of apportioning the world's land resources equitably among different countries. Only in conditions of such an equal distribution of land resources can one unreservedly accept Dr. Bean's statement.

Our experience in Israel has shown us that well-organized rural activity can always achieve income per worker equal to that of manufacture or industry. In our collective undertakings, as they are called, we deal not only with agricultural but also with manufacturing and industrial activities, and a comparison which has been made as a result of a thorough inquiry taking several years shows that the overall average income per head in the agricultural undertakings is fully equal to that achieved in the manufacturing and industrial undertakings. The distinction between agricultural activity and industrial activity in our country consists in the level of investment per worker. The rate of investment per worker in a fully developed agricultural undertaking is double the rate in a normal manufacturing or industrial undertaking. The role of industry, therefore, is on the one hand to permit an increased density of population, and on the other hand to permit a lower rate of capital investment per head. But industry, according to our experience, is not in a position to increase the income per worker.

MAX ROLFES, *Institut für Betriebslehre und Agrarpolitik der Ludwigs-Universität, Giessen, Germany.*

Within the last fifty years or so we have had in Germany, and I think in a number of neighbouring European countries, a very steady spread of industry into agricultural areas—in our country mostly into areas that can be characterized as areas of peasant farming. Most of these areas are certainly submarginal as to the size of the farm, and very often also as to the quality of soil and climate. Under this aspect it has become traditional to regard the spread of industries into such backward rural areas as a very effective means of finding gainful employment for the surplus of labour available, as a means of combating over-population (a fourth alternative to the three methods already suggested here a few days ago by Mr. Date, p. 57).

This development has been characterized, at least in our country and also in Switzerland and parts of France, by a very curious sociological phenomenon: the working population has not split into two groups, into the class of industrial worker on the one hand and the peasant farmer on the other. On the contrary, it is almost the standard development that practically the whole farming community resorts to part-time farming. At least, it is part-time farming if we regard not the individual but the family as a unit; usually one or two members of the family remain on the farm whilst others seek wage-earning work in the industries.

In the traditional school of thought in our country this development of part-time farming with the combination of industrial income and independent peasant farming as the basis of the subsistence of a family has been regarded as a very sound and favourable development. Although this appraisal may certainly in very many cases be sound, I think it needs some qualification.

The development certainly seems to have been satisfactory from the point of view of the industries, for by general consent it is agreed that the peasant has turned out to be a highly efficient industrial worker. This can be proved by the quality of the goods he produces, which include Swiss watches and Leica cameras. But I think that the answer to the question whether this is a desirable social and economic pattern cannot be generalized either in an affirmative or in a negative sense, if we look at it from the farmer's aspect.

One main problem is concerned with the labour capacity of the family. There is often a very real danger that industrial labour in addition to the work of operating the farm may lead to a tremendous overburden of labour in the peasant family, and consequently to very distressful social conditions.

A further important factor is the level of industrial wages. It is by no means a foregone conclusion that these wages will be high. Indeed, at the beginning of the development it was quite obvious that many industries infiltrated into backward rural areas specifically in search of cheap labour; of course there were and are other incentives, such as hydro-electric power, raw materials, &c.

A further problem is the security of industrial wage-earning. The type of industrial work, seasonal or full-year employment, work for women or for men, or work for both, are factors which decisively affect the type of farming that the family can pursue or should pursue in conjunction with industrial labour. Very specific adjustments of the scope and size of the farming unit are absolutely inevitable preconditions if the system is to be satisfactory. However, it must be conceded that at least in our country adjustment is very slow and not sufficiently thorough. This is a major problem of particular urgency, as this system prevails to such an extent that in areas often as large as two or three British counties almost all agricultural land is operated by part-time farmers of this type. A particular hindrance to fully satisfactory adjustment lies in the fact that these men cling to every inch of their land with an extraordinary tenacity.

But the whole problem must now be seen in western Germany under a far broader aspect. Owing to the inflow of refugees from the

east, the average western German village to-day has a population 30, 40, sometimes 50 per cent. over pre-war. It would be a truly disastrous policy to try to absorb this great surplus of rural labour in agriculture in a country where the labour productivity of farming in the traditional forms is already far too low. Industrialization of rural areas seems to be the only solution. But it is quite a different question whether, in carrying out this industrialization, we should systematically plan to establish on a large scale the part-time farming family as the main source of industrial labour with a population not hitherto familiar with this pattern of life. I think any such decision should only be made after a most careful and unbiased study of all the factors I have already mentioned, and only if there is absolute certainty that the people affected really wish to live in such a pattern of social and economic life.

SIR MANILAL NANAVATI, *Indian Society of Agricultural Economists, Bombay, India*

I have no desire to follow Professor Tugwell in analysing the whole problem of the development of industries in rural areas, nor am I going to follow Dr. Bean in calculating the proportional income from agriculture as compared with industry. I am here to give you a small illustration of what would happen if all the suggestions made by Mr. Tugwell were carried out. In India we had a very difficult situation to deal with. In about 1875 we had 56 per cent. of the population supported by agriculture, 13 per cent. by industry; and they were very small-scale industries in those days. The population in agriculture was increasing tremendously, and in recent years the proportion has changed to 72 per cent. in agriculture and 9–10 per cent. in industries. The number supported by agriculture has been steadily increasing, due to the natural growth within the industry and also to the decay of the rural industries in the country. Therefore the need for starting new industries to withdraw the surplus population from agriculture had to be very seriously considered. If we could transfer 15 to 20 per cent. of the population from agriculture to industry I think we should have done one of the greatest wonders of the world. But it has appeared to us to be a very difficult proposition.

I come from one of the old Indian States, where I have worked for nearly thirty-five years, and I have considerable experience in starting new industries to divert the population from agriculture into industry. Here we had to contend with difficulties of all kinds. In the last quarter of the last century, we had, on one side, to contend with

famines and epidemics and, on another side, special measures had to be adopted to remove the pressure of population from the land and to improve agriculture.

To begin with, we had a general survey of all the resources of the State—geological, forest, agricultural, &c. Then we began pioneering industries, since the people were not enterprising enough to start industries on their own initiative. In 1895 the State started a sugar-factory and a cotton-mill; a few other small factories were also started by industrialists with the help and encouragement offered by the State. But the latter ventures failed, as the people had not the requisite training and experience of running industries. Nor did the State factories fare much better; the sugar-factory failed, and the cotton-mill just managed to keep itself going. By 1908 the Swadeshi movement, advocating consumption of indigenous goods and the starting of new industries, had begun. The State therefore made a fresh effort in this direction, sponsored a couple of new cotton-mills, and gave them several facilities and concessions in the shape of tax exemptions and octroi duties and special water-rates. A bank was also started to finance industry and trade.

In 1913 we carried out fresh surveys of our industrial resources, and tried to assess the economic value of each raw material. For instance, we had china-clay. We tried to estimate its value purely as clay and also as raw material for the making of china-ware. The Government also defined its industrial policy, so that enterprising individuals might know what type of State assistance and concessions as well as financial help they would get if they undertook to start industries. Regulations, with the necessary details of this policy, along with a summary of the industrial value of the natural resources, were published for the benefit of the public. The State had to offer several concessions and facilities because the local people were not competent or enterprising enough to take up large-scale industries, and we had to attract capital and enterprise from outside the State by giving all possible help and encouragement. Only thus could we remove the prejudice of the capitalists outside against establishing industries in an Indian State. An important question which arose at this time was whether we should allow the industries to be concentrated in one area or disperse them as far as possible. For we were anxious to avoid the sad experience of Bombay and Ahmadabad—two industrial centres in the neighbourhood of Baroda—where the concentration of textile mills had been accompanied by a rapid growth of slums. Some of our people who went to these centres to get employment returned broken down in health,

and we had to avoid similar consequences in our midst. We therefore decided to avoid these evils of unregulated growth of industries. So what we did was this. For every town we had a separate area, demarcated as an industrial area, where only industries could be established. We also directed the people to select such towns as would suit their convenience. In 1936 we took a census and found that practically every raw material that we had was put to use. Hardly any remained which was not utilized. We had eighteen cotton-mills, a woollen-mill, a cement-factory, chemical, pharmaceutical, and dye works, and several other smaller factories. But the number of people that could be taken away from agriculture was not very great. We started at, I think, 18,000 workers, and now we have about 130,000 to 150,000 directly supported by industries. We found this a slow process; but at the same time we took up another measure, namely, expanding education and increasing the working capacity of the people. We started a number of industrial schools and we made primary education compulsory in the State. The result is, numbers of Baroda people have migrated to other parts of India and practically every part of the world. You will find them everywhere, working either in professions, industries, or trades. Most of the people who migrate came originally from agriculture. This has happened in forty or fifty years. The progress of industry may be considered slow, but there is no doubt that in course of time it will get momentum as capital accumulates and the people get some more experience. It must take more time and more concentrated efforts before the number of people supported by agriculture is reduced both in strength and proportion.

There is another aspect of industrial development, particularly in rural areas, of industries dependent primarily on agriculture. We have a very interesting example of such development in one of the sugar-factories in the Deccan area. It was originally a famine area; every second or third year people used to suffer from drought. By canal irrigation that area has been reclaimed, and now it is one of the finest examples that I have seen of industrialization in a rural area. On a sugar-farm of 17,000 acres a sugar-factory, which also produces alcohol, has been started, side by side with a number of other industries. Then there is a mill which crushes groundnuts and thus supplies oil as well as groundnut cake. There is a soap factory, and also a paper-mill. The farm maintains a dairy herd of 600 milk-cattle. The farm employs 7,000 to 8,000 men, and a modern town with all the amenities of civilized life has sprung

up. These are the two illustrations that I wanted to bring to your notice.

M. R. BENEDICT

We had this morning a very thought-provoking paper from Dr. Tugwell in which he brought out some of the many things that must be considered in an industrialization programme. Because of the comment I made last Monday, I want to make my position clear. I share the view, frequently expressed, that a good many of the predominantly agricultural countries should increase their production of industrial products, and shift away from such exclusive reliance on agriculture. There is, however, an unstated assumption which seems to me to be implied in several of the papers we have heard here. Stated very crudely it is this. If some is good, more is better. This runs counter to the law of diminishing returns, one of the most fundamental concepts in both the physical sciences and economics.

The central theme of economic analysis as applied to production is the discovery of best uses for resources. Resources differ very much, both in kind and amount, in different parts of the world. Related to this is the fact that in situations where you have different proportions of the factors, you use more, proportionately, of those factors which are present in abundance. In keeping with that principle, we in the United States, for example, have used land in ways that in many parts of the world would be considered wasteful. We have had large amounts of land in relation to our population. We need to take each situation and analyse it separately. Some of the papers and discussions seem to me to attempt broader generalizations than are warranted in view of the complex and varied world in which we find ourselves. I raised that question in regard to Professor Medici's paper on Monday. For certain conditions the peasant-farm pattern is desirable and should be encouraged. There are other situations in which it probably would not work, or at least would work only badly.

I have the same reservation in regard to Professor Ashby's excellent paper. It seems to me we should not accept uncritically the notion that everything should and will eventually be carried on co-operatively. We shall be more constructively helpful if we provide guidance in determining what things lend themselves best to co-operative handling, and which are too difficult to operate in that way, or do not offer sufficient prospect of gain to be worth the effort of managing them co-operatively.

In the United States we have had much experience with co-operatives. We have found, as I think others have, that some things lend themselves well to co-operation; others do not. For example, co-operative efforts have been very successful where a specialized crop is produced far from its markets and requires special, large-scale mechanisms for handling and sales promotion. Under these conditions co-operation becomes almost essential if the industry is to be organized efficiently. Examples are the California citrus industry, the Danish pig industry, and the New Zealand butter industry. On the other hand, we have had a number of very ambitious attempts to carry co-operation into the central markets for grain. Most of them have been failures. Here the creation of co-operative mechanisms is much more difficult, and the gains are much less evident.

I think we have the same kind of problem in this matter of industrialization. Industrialization is not some one homogeneous and fungible thing. Our job, in so far as we have to do with it, is to throw light on what kinds of industrialization can be carried out in any particular situation, and which lend themselves best to external stimuli from official or other agencies.

While I found myself quite in accord with Mr. Tugwell's comments, I am less able to subscribe to some of the conclusions implied by Mr. Bean. For example, I do not think Mr. Bean, with his broad knowledge of the United States, would seriously propose introducing industrialization extensively into North Dakota. I have seen that tried, and it did not work very well. North Dakota has a particular set of resources. In the main the best use of those resources is in farming. Nor do I think he would, in the present circumstances, urge increased industrialization in Britain, though if we extrapolate the curves he has presented they would seem to indicate that if reducing Britain's agricultural population to 10 or 12 per cent. has increased average earnings, then to bring it down to 5 per cent. would increase them still farther. In every such situation there must be some optimum beyond which it is not profitable to go.

Several of the factors involved are historical. That is one reason for the high level of industrialization in what we in America call the New England States.[1] Some of the industries now in that area are there because they got started there, and no fundamental economic force has arisen which would compel them to move. The reasons

[1] These are the six States in the extreme north-eastern part of the United States. They were among the first to be settled, and industrial activity gained its first foothold in this area.

why the watch industry came to be centred around Waltham, Massachusetts, are, I think, mainly historical. Some other industries, notably textile manufacture, though once well established in New England, have more and more been forced to the southern States as a result of changing economic conditions. New England got its industrial start and its first accumulations of capital as a result of the shipping industry, and, somewhat as England did, because it was in the game early.

The main point I would make, then, is that we need to be sceptical of extremely broad generalizations on matters of this kind. I quite agree, however, that there may be good and sufficient reasons for modifying what, from an economic standpoint, would be an optimum distribution of economic activities. Even in agriculture we may, for reasons that are not strictly economic, find it advisable to encourage a particular type of agricultural pattern, such as a peasant economy or some other. I think, however, that we need first to make adequate economic analyses, and to know something of the costs of the deviations from the economic pattern that would prevail if there were no intervention. In other words, what do we sacrifice, in economic terms, if we choose to adopt a given policy for social, political, or other reasons?

One other point which is implied in Mr. Tugwell's discussion, though I believe not specifically mentioned, is that in the attempt to industrialize rapidly under forced-draught we are in some danger of fragmenting the world in ways that are not in its best interest. The maintenance of excessive protection to new industries, the input of non-venture capital, and the maintenance of special subsidies beyond those needed in the best interest of the nation concerned are cases in point. Nevertheless, we do need more industrialization in many of the areas. We should encourage it only where the prospects of success are good. It is going to be difficult enough there. I think, too, that we should recognize that in some of these areas the problem is not merely one of relationship between agriculture and industry, but rather one of basic over-population in respect to all resources. Where that situation exists we are not going to get a very high level of living whether we industrialize or whether we do not.

J. F. DUNCAN, *Tillycorthie Farmhouse, Udny Station, Aberdeen, Scotland*

I have the feeling that if we had started with this paper at the beginning of our Conference we should have had a very different background from which to discuss the other problems of peasant farming and of co-operation. There are one or two aspects that have

not been covered in the discussion which has taken place during this week. These discussions have ranged round the relation of the agricultural community to the rest of the community. And in all our discussions, no matter what the proportion of the agricultural community may be, we have to keep in view that it is only part of the general community, with its responsibilities to the general community as well as for itself. Now whether or not we accept Mr. Bean's analysis—and I am not prepared to challenge it—does it not just bring out what we had in our earlier discussion, and what is an old-established generalization, namely, that the standard of living in any community varies in inverse ratio to the density of the agricultural population? I do not see that there is any gainsaying that generalization. If, then, we decide we are to secure a reasonable standard of living for the agricultural community as well as for the general community, we are faced with the problem: How can we reduce the agricultural population and at the same time raise the standard of living?

We are living in a time when new sources of energy are being released, sources of energy which are capable of transference, and therefore capable of being applied to industrial purposes, without requiring industry to be located in any particular area as it had to be when we were dependent upon the force of steam and even, to some extent, upon the internal-combustion engine.

Whether we like it or not, we have to adjust our agricultural pattern to the general economic climate of our age. There is a generalization made by Karl Marx that the prevailing mode of production is the most dynamic force in altering not merely the economic but the social and political conditions of any country, and one does not require to accept the modern gospel of the Communist Party to see that there is a very considerable truth in that generalization. Can we isolate the agricultural community from the general economic climate, from the dynamic forces which are at work in the whole of the world, and expect to keep the pattern of the agricultural community much as it was before? Look at those countries which have been developing their industry—Scandinavia, Great Britain, Denmark, Holland, Belgium—and you will find there has been a growing problem of maintaining their agricultural population, so great that most of these countries now have by legislation, or by collective agreements backed by legislation, practically eliminated the gap between the wages of the agricultural worker and the industrial worker. But the difficulty is this: As you increase your industry alongside agriculture, the standard of living of the indus-

trial community begins to have an impact on your agricultural community. An agricultural community may be relatively stable as long as it is not in contact with the contagion of industry, but, as soon as the industrial sector begins to increase, the rural community begins to desire to share to the full in the industrial benefits, and makes increasing demands.

That is what the advocates of the family farm and the defenders of the peasantry are asking for: that the peasants should be equipped with machinery to enable them to maintain their isolation from the economic developments that are going on. Why should we supply the peasant with the mechanical means of improving his standard of living when these mechanical means only became possible by taking the craftsman from his craft, putting him into a large-scale factory, and making him an attendant on the conveyor-belt? There is just as much argument for retaining the independent craftsman as there is for having the independent cultivator. The peasant and the land-cultivator are not entitled to ask that all the benefits of large-scale industrialization, which are only possible through the concentration of the wage-earners as a proletariat, should be at the disposal of the agricultural community, but that they should have no concern for the industrial community. The agricultural community cannot remain in isolation.

One of the essential features of the development of large-scale industry and the development of our urban civilizations is that the State must interfere in the economic processes to defend the standards of living of its people and to ensure their welfare; and when the Welfare State begins to operate alongside the growing industrial State, then you reach a stage where you can no longer leave things to the free play, or what used to be called the free play, of economic forces. We have to control and manage those forces. I suggest, therefore, that we must consider the whole future of the relations of agriculture and of industry on a managed basis and see whether we can make a better job of it. If we are going to leave the development of industrialization in these communities (which we have called backward communities) to the enterprise of capital seeking profits, then we may get the same kind of development that we have had, unfortunately, in the main industrial areas. Most of us, looking at the industrial revolution in retrospect, would say that we should not want to intensify the big over-grown cities; we want, rather, to see whether we can disperse those we have. That can be done only as a managed policy, and, as Professor Tugwell reminded us, the management has to be able to extend beyond the national borders. There must be

management of a much wider sphere if we are to give the assistance that is necessary for lifting up the backward communities. If that assistance is not exploitation, and if in the development of industrialization we maintain those standards which modern civilization and the dispossessed working-class will insist on getting, then we shall see that it is not merely a problem of maintaining the pattern of the civilization that we have had in the past. We must recognize the broad general tendencies of economic development and the results of the technological advances to be able, within these broad general tendencies, by management, by forethought, to see how far we can shape development to give us the desirable quality of life, as well as the quantitative standard, which is now procurable by reason of those very greatly enlarged industrial potentialities.

M. ZAWADZKI, *Agricultural Economics Research Institute, Oxford, England*

I speak here with some diffidence, since I am a very young economist. My studies were interrupted by the war, but at the same time it gave me the opportunity of seeing many countries. I spent nearly three years in Russia, then a few months with agriculture in Palestine, and finally I have been in Great Britain for nearly six years. A Polish proverb says that travelling educates, and I think the Poles who were dispersed over the world by this War, and many of whom have lived in Great Britain, have profited by the experience. Our only regret is that we have not had the opportunity to make use of the experience in our own country.

On the subject of to-day's discussion I should like to tell you in a few words about the plans for the economic development of Poland which were being worked out by my countrymen in Great Britain during the War. I shall not go into details because, unfortunately, circumstances have rendered those plans of academic and historical interest only. But I believe the problems which confronted us are very much the same as those which other peasant farming countries must face when they prepare plans for rapid industrialization and general economic development.

If we look on the interesting chart presented by Mr. Bean, Poland was just a little above Lithuania: 62 per cent. of population derived their earnings from agriculture, and the national income per head was slightly over $100. Our plan was to double the national income per head in the course of a quarter of a century.

In pre-war Poland, despite the widespread opinion that Poland was a country of great landowners and large farms, the agrarian

structure was peasant. It was a country of small owner-occupiers. Less than a half per cent. of all farmers had more than 50 hectares, and they occupied no more than 15 per cent. of the land used for agricultural purposes.

During twenty years of Polish independence 2½ million hectares were distributed among the peasants. This, however, could not remove the pathological conditions which we have heard discussed here during the first day of the Conference. The pressure of rapidly increasing population on the land was so heavy that two-thirds of the peasants were farming on dwarf farms of less than 5 hectares each. Research carried out a few years before the war estimated that 5 million people could be removed from agriculture without doing any harm to agricultural production. This estimate was made for the conditions prevailing then and for an older agricultural technique, that is, with large use of horse and manual labour and comparatively little use of tractors and modern labour-saving machinery.

It was widely realized in Poland before the War that the first step for raising the general standard of living and especially of those who make their living from agriculture, was to give useful employment to that mass of semi-employed or unemployed people. The problem, however, was a really difficult one. Intensification of agriculture could not help much, for a shift to more labour-absorbing enterprises would sooner or later be more than offset by a fuller use of modern machinery. The growth of industry was so slow that it was unable to absorb the surplus labour, let alone cope with the yearly increase of 350,000 in the total population.

But a closer study of the economic development of western countries and particularly of the methods by which they financed the last war brought our leading economists to the conclusion that the finding of employment in other industries for the surplus of agricultural population was not only necessary but also possible.

The past failure has been ascribed to a large extent to our deflationary policy, rigid adherence to the gold-standard principle, and to an over-cautious credit policy which limited investments to our low level of private savings.

The new plans were based not on the annual State budgets but on the manipulation of national income over a long period of years. The brief outline of the plan elaborated by a team of economists and technicians under the chairmanship of Dr. L. Baranski was as follows: First, it was assumed that, making full use of post-war relief and war reparations, the Polish national income would reach its pre-war level three years after the end of foreign occupation.

In the following period of nineteen years our national income should be doubled. To achieve this, it was not enough to give full employment to all the population. It was necessary to create thousands of new workshops, to make new investments which would double, or nearly double, our national capital, estimated at about $13 milliards. The new level of investment would mean, it was estimated, a yearly investment equal to 15 per cent. of our national income. This is of course a very high rate, and we thought that if the result of these investments was to effect not a decrease but a steady increase of standard of living, we could not at first take more from our own national income than 7½ per cent. The other 7½ per cent. was to be found from outside sources, primarily in the form of industrial equipment. Foreign capital investment would decrease gradually till it would become superfluous in the twentieth year and onwards. From that year onwards investments which till then were progressively increasing could be kept at a steady level of about $1 milliard annually and the surplus of savings, which would be still retained at the ratio of 15 per cent., would go to the repayment of the foreign loans. At the end of the nineteenth year the global sum of the national income would be doubled. Six years later the national income per head of a steadily increasing population would also be doubled.

I come now to the main problems we have faced. There was the question of securing outside help—slightly over $3 milliards of foreign investments during those nineteen years. We were rather optimistic in this respect, counting on the probably greater interest of the western powers in the problems of middle-eastern Europe.

The investments from home sources were of no less importance. Taking for that purpose from 7½ per cent. up to 15 per cent. of the national income might involve compulsory saving. There was the problem of monetary policy and of financing some investments by the so-called primary credit of the central national bank. The money would be directed to the most productive and really necessary investments. Although private initiative would be encouraged, there would be a much greater State intervention than before the War. There might be signs of inflation, especially in the first years of intensive investment, when there were still not enough of consumers' goods being produced. So some sort of control of consumption would probably be necessary, something on the lines of the wartime controls applied in Great Britain.

Generally speaking, the State would play a much more active part in the national economy. We agreed—though some with reluctance

and little enthusiasm—that for that period of rapid industrial development a planned economy would have to be accepted.

Last, but not least, there was the problem of general and particular technical education. We might need some technical help from outside in the first instance, and some of our young men might be sent abroad for technical training.

The total sum of the proposed investment was then divided into four main groups: (1) investment for developing industrial production, (2) communications, (3) building of houses and some other public works, (4) agriculture. Groups of economists and technicians were preparing more detailed plans.

For some time I was in a small team working on agriculture. We had two main problems: the first was land reform and the building of a sound agrarian structure; the second was production. A rapid growth of industrialization and a general rise of standard of living would bring a change in the demand for various foodstuffs. Less cereals, more fats, and more meat would be wanted, and this had to be taken into account with regard to the production programme. We did not proceed very far in the planning of our agriculture when the unfortunate decisions of the Big Three at Yalta made our work rather useless.

I should like to raise only one more point in connexion with the Polish planning. We estimated that during the time of one generation, when the income per head would be doubled, there would be a reversal in the ratio between the numbers of agricultural and non-agricultural population. Instead of two-thirds, only one-third of the people would be engaged in agriculture. Some arguments and fears were expressed that such a revolutionary change, even if possible, might be undesirable. There were fears that it might shake the stability of society. For if we consider the urban population as the dynamic factor in the life of society and the rural population as the static one there should, I think, always be a proper balance between these two factors, and a sudden change might carry a certain danger. The answer to this fear would be to spread industry widely into rural areas without concentrating it in a few large centres.

Of course, there are certain economic arguments against this, but there are not only social but also economic arguments for the wide dispersal of industry in rural districts, thus keeping a large part of the surplus agricultural population at home while employing it in other occupations. Consider just one point. If these 5 million people, plus the natural increase in population, were to be moved to big industrial towns, it would bring about a major housing

problem. If industry were to be so dispersed that hundreds of thousands of people could work in the industries and live in their houses in the country there would be considerable saving of capital, which could be directed to more productive purposes.

I would like to conclude with an expression of my faith that industrialization, whenever possible based on medium- and small-scale enterprise and distributed widely into rural areas, would be the best means of removing the pathological conditions of peasant farming and of raising the standard of living of the rural population.

H. Laforêt, *Algeria*

Since in industry the productive activity of labour and of capital is largely independent of climatic influences, the productivity of an industrial producer is therefore higher than of an agricultural producer. As a result, the net income of a country where there is a considerable industrial population is higher than that in those countries having a purely agricultural population. Moreover, this is still more true, and still more important, if the agriculturist has at his disposition less land and less capital. As a result a poor country (and I mean by a poor country a country which has on the one hand a dense population, and on the other hand, relatively little capital), which must seek by all means to augment the net income of its inhabitants, will therefore try to divert a part of its activity towards industrial activity, and it will see in industry the possibility of employing some of its labour.

At the same time I should like to point out that industry in the twentieth century is employing less and less labour by comparison with the nineteenth century. For instance, electric motors place at man's disposal a considerable quantity of horse-power, quite out of relation to the number of people employed in the industry. One should not therefore delude oneself, when considering the industrialization of a country, about the possibilities of employment which the population will find in the industrial sector. I will give you as an example a relatively poor country, namely, Algeria. I say 'poor' because it has a population which is growing continually, while its capital resources and its natural resources are relatively weak. Therefore if one is setting out to augment the standard of life of its inhabitants one must turn towards the industrialization of the country. But in doing so two problems arise. In the first place there is the necessity of finding the basic resources (by which I mean coal and minerals and petrol as sources of energy or as raw material, or water-power). The second problem is that indicated already by

Professor Benedict, namely, the law of diminishing returns. It is a fact that certain countries have a more marked aptitude in one domain than in another. Thus, the North African has a more marked aptitude for agriculture, while the possibilities of the industrialization of Algeria are limited. One has therefore to aim at an equilibrium. It can be obtained by the development of an industry, but not a basic industry; not, that is, a great metallurgical industry for which the country is not adapted, but some light constructive industry, and above all an industry concerned with the processing of agricultural products which, given the general vocation of the country, are and will remain without doubt the main source of wealth.

K. Skovgaard

In the Scandinavian countries we have had some experience in the spread of industry into rural areas combining agricultural and industrial employment, and I wish to stress one of the points made by Dr. Benedict, that it is not possible to generalize on this problem at all.

In the early process of industrialization the combination was beneficial; agricultural workers and small-holders were alternately employed in agriculture and industries localized in rural districts or in the close neighbourhood of rural districts; but this was only a transitory stage. By and by, as economic conditions improved, the rural population was employed either in agriculture or in industry. The agricultural workers and small-holders became industrial workers to a large degree because wages have been higher in industry than in agriculture. An essential part of the explanation of this transference, however, is no doubt to be found in the development of a social-security system. This system has diminished the risk of unemployment, and consequently the small-holding has lost its significance as an assurance of the necessities of life in times of stress.

Where and when the same development is to be expected, another problem arises which is in line with the remarks made by Dr. Duncan, namely, how far it will pay to relocalize industry in rural districts. As is very well known, many industries have a pronounced tendency to be located in certain localities in accordance with costs. Does it pay to dislocate industries of this type, and will the social advantages be greater than the economic costs of dislocation?

# THE MACHINERY OF FORWARD PRICE-FIXING IN BRITISH AGRICULTURE

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THE basic assumption underlying this paper is that any discussion of a return to the free operation of demand and supply as the determining factor in the fixing of agricultural prices is largely academic.

During the last quarter of a century price control of one kind or another has gradually become the general rule in agriculture. There is now probably no country—at any rate in western Europe, the British Commonwealth, and the Western Hemisphere—in which price-fixing or control measures do not operate over the greater part of the agricultural sector of the economy. Moreover, under the large-scale maladjustments which obtain to-day it is difficult to see any prospect of any general departure from price-control in the foreseeable future. Indeed, there are reasons for believing that the drift away from the free-price mechanism is not a passing but a fundamental phase in economic evolution.

The initial impetus for this development can undoubtedly be traced to a determination to overcome some of the more glaring shortcomings of the free market, especially since these shortcomings appeared to weigh particularly heavily against primary producers the world over. We all think we know what was wrong with the old system, but none of us would care to say dogmatically that in the processes of eliminating some of the things which are wrong we are not incurring any risk of retarding other things which we believe to be right. That is why in the present stage of experimenting with the new system it is of the greatest advantage to be able to pool experiences. This paper is submitted for that purpose only. Its object is to describe briefly the development and the present working of forward pricing in British agriculture. Some indication is also given of the more important problems which arise.

At the outset it may be well to point out that the British method of price control has been improvised from the beginning more or less piecemeal to meet a series of specific 'emergencies'. In 1947 these improvisations were systematized in a truly British way in the Agriculture Act of that year.

Apart from the price control practised during the period of the First World War, the first step in the process was the decision taken in 1924 to subsidize the new sugar-beet industry. This was for the specific purpose of enabling the farmers in the eastern counties of England to substitute a profitable cash crop for fodder crops in the rotation, thus sheltering them from the intense overseas competition in the supply of their staple products, cereals and meat.

But it was the depression of the early thirties which really stimulated what may be regarded as a movement away from freedom of prices towards a managed economy in agriculture. Although the process of development up to 1939 was not consistent or uniform on the lines of a managed economy there was, nevertheless, a pronounced effort to support farm prices and to establish a measure of control in agriculture. This effort took three main forms, viz. control by legally constituted producers' monopolies, control by independent commissions, and control by measures of 'protection'.

Action by producers' monopolies—the so-called Agricultural Marketing Boards—using the statutory powers conferred on them under the Agricultural Marketing Acts of 1931 and 1933, resulted in sellers' prices being fixed for milk, for pigs and bacon, and for hops. The Potato Marketing Board did not fix prices, but endeavoured to reduce price fluctuations by regulating the supplies coming on the market. Apart from the farmers, few people were really happy about a system which made the industry itself the statutory price-fixing agency for its products.

This was not so with the price-support schemes administered by the Commodity Commissions, for these Commissions were appointed not by the industry but by the Government. Under these schemes, while free market conditions continued to operate, the producers' income was supplemented by Government subsidies. The variable deficiency payment for wheat, the fixed subsidy for fat cattle, and the acreage payments for oats and barley were examples of this kind of action. For sugar, the injection of a State subsidy enabled the independently appointed Sugar Commission to authorize the statutory monopoly which owned all the sugar-beet factories to pay fixed contract prices to farmers for sugar-beet.

The prices of British farm products before 1939 were also buttressed to some extent by the protectionist policy obtaining from 1931 onwards. For reasons which need not be discussed here, however, the protectionist measures adopted did not exert any marked effect on the general level of agricultural prices in the United Kingdom.

The outbreak of war in 1939 put a sudden end to what was left of the free-price system in agriculture. Farm products were rapidly brought within a general system of controlled prices which embraced the whole of our economy. The primary objective of this price control, coupled with rationing, was, of course, to shelter consumers from the price inflation and maldistribution which would otherwise have accompanied war-time scarcities.

But, parallel with this, there was the need to provide farmers with both the incentive and the additional capital required for the large expansion in the output of home-grown food which the emergency made imperative. The level of the fixed prices paid to the farmers thus, at an early stage, became divorced from the prices paid by the consumers, and has remained so ever since. The gap between the two price levels was met out of public funds, and its extent is to be measured by the large dimensions to which subsidies on home-produced foods have grown.

The need for the control of farm prices did not disappear with the ending of the War. At first the artificial scarcity of food, brought about by shipping shortage during the War, was replaced by the real world food shortage of the immediate post-war years. This, in turn, has given way to the acute shortage of overseas currency wherewith to buy imported food which is one of our main problems to-day.

In the earlier years of the War it is difficult to trace any deliberate plan governing the fixing of farm prices except that the fixed prices were designed to lever resources into the production of priority products such as milk, wheat, potatoes, and sugar-beet. In November 1940 the Minister of Agriculture gave a pledge that the system of fixed prices and assured markets would be maintained for the duration of the War and at least one year thereafter. The general principle was also laid down that prices would be 'subject to adjustment to the extent of any substantial changes in cost of production'.

Towards the end of the War, however, a system of regular periodical price reviews was introduced and this has now become established as a permanent procedure under the Agricultural Act of 1947.

The purpose of price-fixing under the 1947 Act is to establish stability of net income for British agriculture as a whole. Nothing is said in the Act about the level at which this net income is to be stabilized. But the Government's policy is stated to be the promotion of 'a stable and efficient agricultural industry capable of producing such part of the nation's food and other agricultural produce as in the national interest it is desirable to produce in the United Kingdom, and of producing it at minimum prices consistent with proper

remuneration and living conditions for farmers and workers in agriculture and on adequate return on capital invested in the industry'.

The Act perpetuates the system of annual reviews of prices each February, which developed in the last year of the War. As a result of these annual reviews the Government fixes the prices for stated periods ahead for all the main farm products, i.e. fat cattle, fat sheep, fat pigs, milk, eggs, wheat, barley, oats, rye, potatoes, and sugar-beet. These eleven commodities, which cannot be reduced in number but can be added to, together account for 70 per cent. by value of the agricultural production of the country. It is also possible to hold special price reviews in between two February reviews if this is warranted by circumstances involving a substantial change in the economic position of the industry.

For crop products the prices fixed each February relate to the crops harvested in the year following that in which the review is held. For livestock and livestock products the prices fixed cover the twelve months period immediately following the review. But in view of the long-term character of livestock production provision is also made for the fixing in alternate years of *minimum* prices for such products four years in advance. When the time comes for fixing the actual prices for livestock products, such actual prices may be higher but not lower than the long-term minima previously announced. This forward-pricing system thus eliminates price fluctuations during any one 'production period' for both crops and livestock.

Before fixing the annual price schedules the Government is under an obligation to consider, *in consultation with representatives of the farmers*, 'the general economic conditions and prospects of the agricultural industry'. This obligation to consult means that, in a sense, the prices are negotiated prices. But it is not essential that the conversations should result in agreed prices; the ultimate price schedule is the responsibility of the Government alone.

It is clear, however, that the consultations between the Government and the farmers which take place each February are of the greatest significance. At these consultations the two sides will have before them a wide range of financial and economic data. For example, they will scrutinize calculations as to the trend of the net income of the 'national farm', data on the financial position of farms of different types and sizes, cost-structures of the various farm commodities, index numbers comparing farm profits with the incomes of the non-farming sector of the rural population, &c. Many of these statistics are accepted without question by both sides,

since they are collected in an impartial way by Provincial Agricultural Economists attached to the Universities. It is to be regretted, however, that the calculations which are made about farming costs and incomes have never been made available for public discussion.

The statistical material is, of course, only one aspect of the information which is examined and discussed at these consultations. If prices are to be reviewed against the background of the country's food supply position as a whole, other factors 'not readily reducible to statistical form' must also be considered. For example, it is necessary to consider consumer requirements in relation to import policy, the amount of price incentive necessary to call forth the required outputs, the technical needs of a proper balance in farming, &c.

There has been no official account of the exact procedure adopted at these annual consultations. But it is generally understood that after disposing of points of disagreement, discussion centres around a sum called the 'global total' which is taken to represent the industry's net earnings over a period of twelve months. This forms the basis for achieving the primary objective of maintaining stability of net income for farmers *as a whole*. This 'global total' is then broken down for the individual farm products. It is at this stage that the Government reserves its right to give price incentives to stimulate the production of those commodities considered to be desirable in the national interest.

It remains to state that the British system gives the producer not merely a guaranteed price but also an assured market for his output at that price. Thus it is coupled, so far as all the main products are concerned, with a system of central purchase by the Government either directly—as for livestock—or through accredited agents—as for cereals, sugar-beet, milk, and eggs. Under the 1947 Act, however, the Government retains the right to fix quantitative limits to the total amount of any product for which the guaranteed price will be paid. So far this right has not been used. If and when limitation of supply becomes necessary, it is laid down that it 'shall only be imposed as nearly as may be at the same time as determinations are made regarding prices. This gives effect to the general principle that a guaranteed price is of little value to a farmer unless he knows at the time what volume of produce is covered by that guarantee of price.'

It is too soon to attempt any assessment of the system just described, for so far it has operated almost entirely in a crisis situation. There is no evidence yet on which to form any judgement about its ability to perform the more fundamental functions which any adequate

price system must perform in a progressing economy. It may be permissible, however, to touch briefly on some of the main questions which must inevitably arise.

It has already been stated that the aim of the British system is the maintenance of stability of net incomes for farmers. Assuming for the moment that this is a legitimate aim, let us consider how far a system of forward pricing is likely to achieve it. Two fairly obvious shortcomings will immediately come to mind.

The first is that forward prices are more likely to accentuate than to correct variations in income resulting from those variations in yield which are so prominent a feature of agricultural production. In the free market these variations in yields were often compensated by differences in prices—low yields in particular being offset by higher prices. Here it must be admitted that the forward-pricing system only gives stability on the assumption of normal yields. But no price system is ever likely to prove adequate for correcting variations in income resulting from the uncontrollable character of the physical output of farming. It may be suggested that some system of insurance is much more appropriate for protecting farmers against income instability resulting from the hazards of nature.

The second obvious shortcoming is that stability in terms of money prices does not necessarily mean stability in real prices, in view of changes in the value of money. Here, however, the British system, which aims at stabilizing net income rather than prices, takes account of changes in costs such as would accompany changes in the purchasing power of money in so far as such changes may fall within a production cycle.

In considering stability of net income, however, the most important consideration is the distinction which must be made between its short-term and its long-term features. The British system of forward pricing forms part of a policy designed to give a measure of long-term stability to agriculture, but the specific measures concerned are confined to price-fixing in the comparatively short run only.

The maintenance of a reasonable measure of income stability in the short run can be regarded as a substantial merit in the British system. And it is a substantial merit because it is both socially desirable and in the economic interest of the community to protect farmers from those sudden and violent short-term fluctuations of prices and incomes which in the past have so bedevilled their industry.

The problem of long-term income stability is very much more complex in principle. Before considering it, it may be well to touch

on some possible effects of the forward-pricing system on the technical and on the economic efficiency of the farming industry.

The system of forward pricing should make it easier for the farmer to adhere to a settled policy in the choice of the number and type of enterprises to include in his farming plan, since he can reasonably assume that price changes when they are made are fairly reliable guides to future conditions. Under the free-price system it was often difficult for farmers to distinguish between those changes in prices which were of fleeting significance only, and other price changes which were really significant for the future. Furthermore, owing to the extreme sensitivity of the free-price mechanism, fluctuations in prices often occurred which were too rapid for the productive organization to follow. Indeed, a change in prices might set in motion a change in the organization of production which was out of date by the time it had come into effect. Apart from causing real hardship to the farming sector, short-term fluctuations of this kind caused so much confusion and uncertainty in the minds of farmers that their effect was to make it more difficult for them to adjust their farming to the genuine long-term requirements of the situation.

Under a system of assured markets at guaranteed prices success in farming is likely to depend less and less on the luck of buying and selling and more and more on technical skill and managerial efficiency. In effect, the new system offers the farmer the opportunity, hitherto the exception rather than the rule in agriculture, of *producing to contract*. From the farmers' point of view production to contract has many advantages. In particular, the farmer who has an order to sell before he starts to produce his crops and his livestock is free to devote most of his energies to the domestic problems of organization and management of his farm.

It would be foolish to argue that even on the technical level the system of forward pricing is entirely beneficial in its effects. On the contrary, any system of fixed prices will have two inherent drawbacks which may react detrimentally on the standards of technical efficiency.

The first danger is that too much security and stability may endanger enterprise and lead to sloth and stagnation. In particular, if prices are over-generous they may retard rather than encourage farming output. Thus some farmers may be disposed to work less hard once they realize the possibility of earning enough to maintain their accustomed standard of living by a more leisurely tempo of farming.

But more serious is the danger that the British system, which so far has recouped farmers for increases in costs, must tend to remove from producers the incentive to improve their general level of efficiency. The free-price system, on the contrary, provides every incentive for increasing efficiency as costs rise, and especially for economizing in the use of those particular production-factors whose costs are rising most steeply. To take an important example. With free prices, rising wages will cause farmers to use labour more carefully and will tend to encourage mechanization. But if rising wages are fully reflected in increased prices the incentive to mechanization is weakened. As a result of this passivity to costs the pattern of costs will tend to be distorted, and maladjustments and inefficiency must result.

To some extent this criticism is met in the United Kingdom by linking the price-fixing system to an act of Parliament which also provides for the application of efficiency measures. Indeed, it has been widely proclaimed that guaranteed prices are only given as a *quid pro quo* for efficiency in British farming. Actually the 1947 Act makes provision for the application of severe sanctions against those farmers who fail to farm according to 'the rules of good husbandry'. It has yet to be seen how effective these sanctions will be. But, in any case, they can only be effective in the narrowest technical sense since 'the rules of good husbandry' can only have a farming interpretation.

Economic efficiency cannot be entirely a matter of a *quid pro quo* by farmers as such, for it is also concerned with the wider problem of ensuring the optimum level and pattern of agriculture in the national interest. The real task facing any government operating a forward-pricing system for agriculture is, in fact, that of deciding how big its agriculture shall be and how it shall divide its activities between the production of different commodities. This means avoiding fixing prices at a level which will, over the long period, result in (*a*) the production of too much high-cost food at home which could be bought at lower prices from abroad, and (*b*) diverting into agriculture resources which could be used to better effect elsewhere. The British system has hitherto only operated in conditions of emergency, when it has been comparatively simple for the Government to decide the relative priorities to be given to particular farm products. For example, in war-time priorities had clearly to be given to those products which saved most shipping; at present those products which save most dollars must equally clearly come first. The return of more normal conditions will make this task much more difficult.

But there may be a case for maintaining agricultural activity at a

long-term level different from that to which a free-price system would tend. For example, political considerations might call for a higher proportion of food to be grown at home than would be in free-market conditions; or nutritional standards might call for a higher consumption of food than, with the existing distribution of incomes, might be brought about by the operation of the free-market forces. In principle the chief problem involved here is that of deciding how much it is worth while to pay for a given degree of this or that non-economic effect, and then to adjust the level of agricultural activity aimed at, so as to ensure that not more than a worthwhile price is in fact paid.

Apart from such non-economic considerations, however, there still remains a case for some measure of interference with the free-price system, even though the superiority of that system as a means for attaining the optimum long-term level of economic activity be conceded. While there should be a constant effort to move towards the 'free' level, there is need, nevertheless, to retard or soften the process of adjustment so as to minimize the hardship to the farming sector. In other words, there must be some compromise between long-term and short-term interests, for, as Marshall was careful to point out, 'there is no hard and sharp line of division' between the two.

This problem may become particularly acute in Great Britain. For, as I have already indicated, current British price-fixing policy seems definitely to contain the intention to provide farmers with *long-term* as well as *short-term* stability. But in a progressing economy there can never be a *static* long-term optimum level for agriculture. It follows, therefore, that if the use of the price instrument to encourage this optimum long-term level is retained, then complete stability, so far as it is brought about by price control, can only be absolutely guaranteed in the relatively short term.

Some economists have suggested that this dilemma, which is a fundamental one confronting other countries besides Great Britain, can best be resolved by a skilful admixture of forward pricing and free markets. As I understand the suggestion, it is as follows: Let a sufficient measure of forward pricing be introduced to cope with the short-term problem. But apart from this let prices take care of themselves. Then let the social problem of minimizing the hardship to the farming sector accompanying a long-term downward adjustment be dealt with by means more appropriate than any pricing system. Provided satisfactory administrative details could be worked out this suggestion has much to commend it.

The advantages of short-term price stability to farmers have already been indicated. What, if any, are the direct benefits to consumers? It can be argued that the stability which forward pricing brings to the producer helps to ensure a more steady flow of supplies to the consumer and thus protects him from wide variations in the retail prices of food. This theory has yet to stand the test of experience. In the past the wide fluctuations in producers' prices were never fully reflected in retail prices. It would be difficult to prove that, even in times of the most extreme variations in world prices of agricultural produce, consumers (outside those regions where malnutrition is endemic) ever suffered any real hardship through scarcity of food resulting from the deterrent effect of price variations on output. Since the consumer is mainly concerned with the cost of food as a whole, or, indeed, with the general level of the cost of living, he is much more likely to be anxious to ensure that prices are not fixed at a level substantially higher than would obtain in the free market. But even to consumers the benefits are not to be measured simply in terms of a plentiful supply of cheap food. In times of depression there may be plenty of 'cheap' food available for sale in the shops, but many potential consumers will lack the money to buy it. It is arguable that an agriculture which is maintained reasonably stable through boom and slump would be a potent stabilizing factor in the economy as a whole and so confer a hidden benefit on the whole community by helping to avert depression.

In conclusion, it may be well to point out that this particular British method of price control has been used because, up to the present, it has proved a fairly simple and effective method of meeting the special situation in a food-importing country. In these circumstances price stabilization for the home producer is fairly easy so long as the political climate permits the difference between the fixed price and the world market price to be financed at the expense of the consumer or taxpayer. Even for an importing country, however, there is the problem of how long a really substantial margin above world prices can be maintained for the home product in the event of a severe depression in world prices. Not only might the United Kingdom find it difficult to maintain wide price-differentials in the face of the principles accepted under the I.T.O. Charter, it would also have to consider the adverse effects of such a policy on its exporting capacity.

It is not within the scope of this paper to deal with the even more difficult problems which arise in the international field. But two main difficulties which stand out prominently in the light of

experience may be mentioned. They are (1) how to get a sufficient measure of agreement between major producing countries to operate a comprehensive scheme in the absence of any organization to apply sanctions, and (2) how to prevent any stabilization scheme on world markets from being defeated by the over-production which successful price-fixing is likely to stimulate.

No one will deny that price-fixing is fraught with difficulties and objections. But the crux of the matter is whether these objections are outweighed by the advantages from the *general* rather than from the *sectional* point of view; and whether, given all the objections, price-fixing does still solve more problems than it creates.

*In reply to questions* PROFESSOR THOMAS *said*:

The question has been asked if there is any relation between price-fixing and the apparent decline in the quality of production? In so far as there has been a decline in quality, it is probably the result of the emphasis on quantity made inevitable since 1939. I mentioned in my paper that if prices are over-generous then they may result in an actual decrease in output. But I did not touch on the relationship between price-fixing and faulty production. If I am right, however, in my contention that the system we are operating in Great Britain is a system of production to contract, and if it continues in more normal times and assumes the usual features of production to contract as this operates in industry, the system may become a means of improving the general efficiency of agricultural production. Indeed, it cannot help doing so if forward prices are associated with a contract to deliver goods of a stipulated grade and quality at stipulated times and in stipulated quantities.

Dr. Skovgaard asked if any plans have been worked out to meet the danger of over-production in certain commodities? So far as I am aware there are no detailed plans. I take it, however, that when such a danger occurs, it will be taken into account at the February reviews and the prices of those products in over-supply will be reduced. We are really trying to work a system in which the forward prices are likely to be in line with the real supply-and-demand situation in the immediate future. Our system is in a sense a compromise between the free-price system and the so called fixed-price system. The point is that under the forward-pricing system the emphasis is on *forward* prices, not on *fixed* prices.

Professor Benedict has asked me to give some indication of the attitude of different groups of producers to the forward-pricing system. Do they like it better or not so well as the free-price system?

It is very difficult to answer that question on the basis of our experience to date. As I pointed out, so far the system has functioned in a crisis situation, and this crisis situation has determined the form of procedure as well as the reaction of producers. It has been entirely favourable to producers. What will happen when circumstances change one cannot say. Until the system is put to the test of functioning under more normal conditions it will be impossible to answer your question from experience. Any answer I should give now would be speculative only.

In answer to the query, if the system has worked to insulate the British farmer from the downward trend in world prices, I should say that so far the answer is certainly Yes.

Someone has asked if it is not necessary also to fix land prices and rents? That raises another problem. I suppose that once you start fixing prices you may be forced to go the whole way and fix prices at every level. So far, however, land values and rents have not been fixed. But rents are indirectly brought into the picture, for the 1947 Act also deals with the important question of land tenure. Thus, under our present system it is possible for both the tenant-farmer and the landlord to demand that the actual rent paid for a farm shall be submitted to independent arbitration every three years.

I should like to mention one other point here which I omitted from my paper: it is that in Britain minimum agricultural wages are also fixed by law. As a result there has been a marked and very welcome improvement in the wages of farm workers since 1939. Indeed, the improvement of the standard of living of the farm worker is an essential feature of our general agricultural policy.

The fixing of wages is left to a government-appointed body called the Agricultural Wages Board. This Board consists of an equal number of representatives of farmers and of farm workers, together with a number of independent members appointed by the Minister of Agriculture, one of whom acts as Chairman. The system might be aptly described as a system of legal collective bargaining. While the workers' representatives and the farmers' representatives will put forward the pleas for and against an increase in wages, the final decision must obviously be taken by the independent members. In this way, in practice it is a system which combines collective bargaining with independent arbitration. I think that most people are agreed that it is really a very good system.

Dr. Hanaü has suggested that if it is academic to discuss the free-price system at the present time, it is also academic to discuss the planned-price system if the prices deviate from supply and demand.

I am not sure that I understand the point of this question. My statement that a discussion of the free-price system is academic was prompted only by the fact that since the free-price system is no longer functioning it has no bearing on actual conditions. But if planned prices deviate from supply and demand, that is a practical situation, and a discussion of a practical situation can never be academic.

When Professor Norton asks me if the English system will work as well when our prices are above world prices as it has done when our prices were below world prices, as they have mostly been during the past two years, he has really repeated a question which I asked myself in the paper, but was careful not to answer. And I was careful not to answer it because at the moment any answer to that question must be entirely academic!

Mr. H. E. Garrett asks if, in view of the figures given in the recent White Paper on national incomes, it is not the case that the forward-price system tends to have an inflationary influence.

That is a very complex question. I am glad it has been raised, because it does underline what I said about the potential dangers of price-fixing. It would, however, take too long to attempt an adequate answer to the question.

Dr. Bean asks, what is the total cash value of the amount that the farmer receives from the market and the amount that he receives in subsidies from the Government. I am going to ask my colleague, Dr. Kirk of the Ministry of Agriculture, who is well informed on these matters, to answer that question.

J. H. KIRK: The total gross income of the farming industry in the United Kingdom is about £800 million. The total net income is about £250 million. The sums given directly to farmers by the Government, if by that one means subsidies paid to farmers in cash, are comparatively small. The greater part of Government assistance is given to farmers through the price system, and the amount cannot be separated from that part of the total subsidy which is also for the benefit of the consumers.

# FARM PRICES AND THE OUTLOOK IN THE UNITED STATES

O. C. STINE

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IN the United States price readjustments are under way. The termination of price controls released inflationary pressures and prices moved upwards sharply in response to accumulated deferred demands greatly in excess of current production. As usual, the process of working out of inflationary conditions is being distributed throughout the national economy over a period of time. As usual, the prices of farm products and of other raw materials have responded fast to changing conditions. To some extent they have anticipated changing market conditions, whereas the adjustments of the prices of most processed products being administratively controlled were postponed, to be made only in response to consumer pressures. These generalizations should be qualified to recognize also differences in the volume of deferred demands, the time required to provide the supplies needed to meet them, and the elasticity of demand for the several products. These differences have a tendency to spread out the period of price adjustments.

The turn in the prices of agricultural products would mark the beginning of 1948 as the peak of the inflationary rise in prices in the United States. The market for agricultural products in 1947 was greatly influenced by European needs and the programme of the United States to supply those needs. As usual, the prices of many agricultural products were pushed up by market speculation generated largely by rising prices and uncertainty as to the adequacy of supplies to meet the demands in both domestic and foreign markets. The prices of farm products in January 1948 reached a high point, 307 per cent. of the 1910–14 base. The fall from this peak was sharp and rapid for a short period. There was some recovery, but the harvesting of large crops in 1948 held prices for many products at approximately the support levels for the remainder of the year. Early in 1949 there was another sharp break, resulting largely from the pressure of large supplies. The decline was checked early in the year and remained firm for some months. Some further adjustments are expected in the remainder of 1949 and in 1950, but there is not now in prospect any such depression as occurred following the First World War. The

*Commodity Prices: Decline in Selected Indexes and Commodities, United States, post-war peak to May, 1949*

| Item | Unit | Price or index level: Post-war peak | Date of peak | May 1949 | Decline from peak to May 1949 |
|---|---|---|---|---|---|
| | | $ | | $ | Per cent. |
| Wholesale prices (1910–14 = 100) | | | | | |
| All commodities | | 248·0 | Aug. 17, 1948 / Sept. 14, 1948 | 226·0[1] | 8·9 |
| Farm products | | 285·1 | Jan. 13, 1948 | 239·4[1] | 16·0 |
| Food | | 296·1 | July 20, 1948 / Aug. 17, 1948 | 254·0[1] | 14·2 |
| Consumers' price index (1935–9 = 100) | | | | | |
| All commodities | | 174·5 | Aug.–Sept. 1948 | 169·7[2] | 2·8 |
| Foods | | 216·8 | July 1948 | 202·8[2] | 6·5 |
| Prices received by farmers (1910–14 = 100) | | 307 | Jan. 1948 | 256 | 16·6 |
| Parity index (1910–14 = 100) | | 251 | Jan., June–Aug. 1948 | 245 | 2·4 |
| Price received by farmers | Unit | | | | |
| Flax-seed | bus. | 8·16 | Mar. 1947 | 3·68 | 54·9 |
| Corn | ,, | 2·46 | Jan. 1948 | 1·22 | 50·4 |
| Cotton-seed | ton | 96·00 | July 1948 | 50·40 | 47·5 |
| Soybeans | bus. | 4·11 | Jan. 1948 | 2·18 | 47·0 |
| Hogs | cwt. | 27·40 | Sept. 1948 | 17·90 | 34·7 |
| Butter-fat | lb. | 0·900 | Oct. 1946 | 0·606 | 32·7 |
| Milk, wholesale | cwt. | 5·21 | Nov. 1946 | 3·60 | 30·9 |
| Wheat | bus. | 2·81 | Jan. 1948 | 2·00 | 28·8 |
| Eggs | doz. | 0·587 | Dec. 1947 | 0·434 | 26·1 |
| Cotton | lb. | 0·3769 | Oct. 1946 | 0·2997 | 20·5 |
| Beef-cattle | cwt. | 25·20 | July 1948 | 20·90 | 17·1 |
| Potatoes | bus. | 2·07 | Apr. 1948 | 1·81 | 12·6 |
| Peanuts | lb. | 0·106 | Nov. 1948 / Apr. 1949 / May 1949 | 0·106 | — |

[1] Week of June 14, 1949. [2] April 1949.

average of all prices received by farmers is now (July, 1949) about 250 per cent., and the prices farmers pay average about 244 per cent. of the 1910–14 base price. The prices received by producers have declined about 18 per cent., while the prices paid have declined only about 3 per cent. from their highest point in post-war inflation.

Large feed supplies and increasing livestock production are pressing prices towards lower levels. However, government-support

*Prices received by Farmers for May* 1949, *Estimated Prices for July and December* 1949 *and June* 1950, *and Index Numbers* (*Aug.* 1909–*July* 1914 = 100)

| Commodity | Unit | May 1949 price | Estimated price July 1949 | Estimated price Dec. 1949 | Estimated price July 1950 |
|---|---|---|---|---|---|
| | | $ | $ | $ | $ |
| Wheat | bus. | 2·00 | 1·70 | 1·90 | 1·50 |
| Corn | ” | 1·22 | 1·25 | 1·15 | 1·10 |
| Oats | ” | 0·660 | 0·60 | 0·65 | 0·55 |
| Cotton | lb. | 0·2997 | 0·2900 | 0·2925 | 0·2900 |
| Tobacco | ” | 0·464 | 0·465 | 0·432 | 0·427 |
| Apples | bus. | 3·14 | 2·75 | 1·90 | 2·10 |
| Oranges | box | 3·30 | 3·25 | 1·40 | 2·00 |
| Potatoes | bus. | 1·81 | 1·35 | 1·00 | 1·20 |
| Cotton-seed | ton | 50·40 | 50·00 | 45·00 | 45·00 |
| Soybeans | bus. | 2·18 | 2·10 | 2·00 | 2·00 |
| Peanuts | lb. | 0·1060 | 0·1050 | 0·1040 | 0·092 |
| Flax-seed | bus. | 3·68 | 3·50 | 3·50 | 3·14 |
| Beef-cattle | cwt. | 20·90 | 22·25 | 17·50 | 17·50 |
| Lambs | ” | 25·30 | 24·00 | 20·00 | 19·50 |
| Hogs | ” | 17·90 | 20·75 | 16·00 | 17·50 |
| Milk, wholesale | ” | 3·60 | 3·65 | 4·25 | 3·00 |
| Butter-fat | lb. | 0·606 | 0·605 | 0·640 | 0·520 |
| Chickens | ” | 0·282 | 0·267 | 0·260 | 0·250 |
| Eggs | doz. | 0·434 | 0·458 | 0·540 | 0·420 |
| Index (Aug. 1909–July 1914 = 100) | | 256 | 255 | 236 | 219 |

measures are checking the sharp declines and contributing materially towards stabilizing prices.

Furthermore, the national demand for agricultural products is being sustained by high levels of employment and of consumer purchasing power. There is some concern about increased unemployment, but the percentage of the labour force seeking work and not finding a job is low. The earnings of the employed are at a high level and there is a large volume of savings available to many consumers. The purchasing power of the unemployed is being supported by insurance payments. Under these conditions the domestic market remains strong.

The costs of farm production and of living have been reduced, but only moderately. The scarcity of labour and the high wages paid in industry resulted in high farm wage rates during the war period. The return of ex-soldiers to the farm and the recent slack in industrial employment have resulted in an increase in the farm labour supply and more recently a slight decline in farm wage rates. Supplies of

materials, machinery, and other equipment used on the farm have increased also, and the prices of some have declined moderately.

The relation of farm prices received to prices paid has been quite favourable to farmers since 1941. However, the average of the prices received may fall below the average prices paid in relation to the 1910–14 averages within the next twelve months. This less favourable balance is likely to continue, but Government measures are likely to prevent such extreme depressions as occurred in 1921 and 1932.

Now I presume you are asking how much the government-support programme affects prices. First, note that the prices of most fruits and vegetables and of meats are not supported. The supports of dairy and poultry products apply mostly to seasonally heavy production and do not have much effect upon the annual price averages. The prices of sugar, wheat, and potatoes are higher than they would be without supports. However, the effect on the food cost of living in the United States is probably less than five per cent.

The price of cotton is being maintained, whereas it would otherwise be greatly depressed by large supplies. But I am told in Europe that American cotton is even now the cheapest cotton in the world. The price of tobacco is not far from what it would be without supports as long as the current export volume is maintained. Feed grains are being supported, but the market prices of these grains are considerably below the support level. For all, excluding cotton, a free market would probably result in average prices for exports not more than 10 per cent. below present levels.

To farmers the price-support measures make significant contributions towards stabilizing prices and incomes in harvesting seasons, months of heavy seasonal production, and in readjustments in demand from war conditions to more normal requirements. However, the pre-war surplus problems are reappearing. The production for the domestic market of some foods has increased so much that even with the very high levels of purchasing power prices have been depressed below parity and, in some cases, to the low pre-war level. Large feed grain crops are so much in excess of feed requirements as to begin the accumulation of stocks. Cotton production is in excess of requirements and will begin again this year to build a large stock-pile. Fats and oil supplies are so large as to depress prices to low levels. Recovery of production abroad and trade restrictions are reducing the foreign requirements of products from the United States. Eventually other countries will have similar surplus problems.

Looking at agricultural prospects internationally it is evident that

in the process of readjustments after the Second World War, as after the other Great War, farmers face problems associated with declining price levels, unbalanced exchanges, cyclical fluctuations in production and buying power, and chronic surpluses. If prices follow the usual course after great wars, farmers have a hard road ahead for many years.

I, for one, do not assume that prices generally and farm prices in particular must follow the historical pattern of former post-war periods. I think they will unless effective measures are taken to solve or avoid many of the problems arising in readjusting from war conditions to a healthy international economy.

In relation to this point I offer a few observations and suggestions as to conditions and measures that might improve the price and income outlook for farmers.

Farmers can help by keeping themselves informed as to changing market conditions and prospects, and making adjustments in costs and in production in view of market requirements and price prospects. However, the problems and the appropriate solutions extend beyond the farm and beyond the power of the individual farmer. National governments have responsibility and power to aid and protect farmers to some extent in these matters, but many problems extend beyond national boundaries. Effective remedies require international co-operation.

Perhaps we have reason to hope that co-operating nations will undertake effective measures to:

1. Broaden markets by reducing trade barriers of all sorts.
2. Encourage efficiency in the use of agricultural resources.
3. Facilitate shifts in labour from relatively unproductive areas to the more productive areas, and from agricultural to non-agricultural production.
4. Stabilize currencies and exchanges.
5. Stabilize the supplies and prices of storable agricultural products by providing storage for surplus supplies in seasons of high yields to carry into low seasons, and aid for moving supplies from surplus to deficit areas.

Co-operative action along these lines could encourage and aid farmers in adjusting production to demand, developing more efficient use of resources, providing an expanding market for agricultural products, and contributing materially towards the stabilizing of prices and incomes to farmers throughout the co-operating States.

*In answer to questions*, Dr. STINE *said*:

Professor Skovgaard has asked what the prospects are for the new U.S. policy advocated by the Secretary for Agriculture, whereby prices would be free, but the Government would sustain farm incomes. The Congressional reception of this proposal has not been favourable! The fear is of the great cost that would be involved if that programme were extended to all meats and vegetables. It is possible that a trial will be made, but the prospect is not very good for even a partial trial.

Professor Ashby has asked three questions: (*a*) how the suggested commodity corporation would be established and operated; (*b*) whether a stock-pile—admitting its necessity for carrying consumers' supply from one harvest to the next, and its desirability to carry the consumers' supply for the worst harvest—does not in fact exercise a more depressing influence on prices than any other factor on the market, so that a commodity price never recovers from depression while a stock-pile lasts; and (*c*) if the commercial community has ever shown confidence in statements of public policy about the stock-pile.

These are a large order. I will make a brief statement on what I consider to be basic considerations in the formation and development of such a corporation.

In the first place, I think it should be financed so that it will be free from the direct controls of national governments, except in the overall general policy, in approximately the same measure or extent in which the international bank is supervised or directed through national governments. The objective should be to establish an institution which will operate economically, will buy products, store when the crops generally are good and supplies are abundant, and carry them over longer periods than the market will carry them, to be fed back into the market when supplies are short. I do not think that individual commodity agreements will succeed. I think it is essential that several commodities traded internationally shall be operated in relation to each other, so that there is in fact an international pool involving the interests of several countries. Some of them, of course, in the case of individual commodities, will want to sell at the highest possible price, and others will want to buy at the lowest possible price. In this pool the considerations would be more on a basis of the relation of one price to another or the relation of the prices of each of the several products to others. Operations should be conducted on the basis of general principles of financing and trading.

I do not agree with the implied criticism of the stock-pile. The

significance of a stock-pile will depend upon policy with reference to its release. If there is no understood public policy with reference to that release, Mr. Ashby's statement is correct. But if there is an understood policy that in fact sets apart this stock-pile from what is currently available in a season of abundant supplies, there can be a price determined by the supply available for the season.

Professor Ashby asks if the commercial community has ever shown confidence in public statements about stock-pile policy. In the U.S.A. they have been forced to do so. Of course, government policy must establish confidence. I am critical of U.S. Government policies at times, because the public is not told enough about what is being done and about what is planned. However, in the U.S. we have often seen a price of a product being held considerably higher than it would have been had the stock-pile been freely available to the market. Stock-piles do disturb traders, but I think this can be largely remedied by announcements for longer periods of government policy with reference to conditions of release, both as to distribution and prices.

Professor Norton has asked me to give the level of farm wages in the U.S., and to predict what the average farm price level will be in the U.S. in December 1950.

I do not remember the level of wage rates, but Dr. Bean reminds me that the current index of farm wage rates compared with pre-war 1910–14 is about 400. Recently there has been a very moderate decline. May I say in this connexion that the farm wage rates in the U.S. are very sensitive to the amount of industrial unemployment, and to the prices of farm products? There is almost no farm wage fixing.

As to Professor Norton's request for a prediction, we are continually making estimates or 'guesstaments' of prices a year ahead. We assume that in general supply and demand conditions do largely determine the level of prices, and that government intervention only modifies them in the short run and in special cases. The index of prices farmers received for all farm products in July was 249. We estimate the average prices for December 1949 at about 236, and for July 1950 about 220, and that the prices which farmers pay will not decline as much. So that by July 1950 we shall have an unfavourable price relationship.

Professor Nash inquires about the relation between the U.S. Government price-support policy and the export policies for foodstuffs produced in the U.S., and asks me to make predictions as to the likely future of any such policies.

Predictions as to policy on that point would be rather hazardous. Murray Thompson may correct me if he wishes. Something may be said of the plans for wheat. To meet the commitments in the International Wheat Agreement a subsidy will be needed which is approximately the difference between the current market price and the commitments under the Wheat Agreement. Otherwise wheat exports are not subsidized. There is another point to be noticed in that connexion, and that is that purchases by the Commodity Credit Corporation for shipments to occupied areas are charged at the support level rather than at the market-price level.

E. F. NASH

This question is on a different point, and has to do with the International Wheat Agreement, and the answer to it may be that I have not read my document carefully enough; but I shall be glad of the information. My understanding of the International Trade Charter, and of the section in it dealing with the international commodity agreements, was that in order to be able to establish an agreement which purports to control prices or supplies, certain conditions had to be fulfilled; among them the provision that there had to be agreement that the market situation in regard to the commodity concerned had to be one in which a burdensome surplus was shown to exist and/or that there was either in existence or in prospect the development of unemployment or under-employment in connexion with the commodity concerned. Could Mr. Stine just tell me whether I am right or wrong in supposing that those are the conditions; and if I am right, does that mean that there is general agreement that there is now a burdensome surplus of wheat?

O. C. STINE

I do not have in mind clearly the language of the agreement with reference to employment or unemployment conditions. There is no burdensome surplus of wheat now, but one is imminent. We have produced very large crops, and there is another this year. If we cannot export 4–5 hundred million bushels, we begin the accumulation of stocks. We are anticipating that situation this year or next year by suggesting to farmers that they seed less wheat, to bring production more nearly in line with the prospective market, when production has recovered in deficit areas. We were fortunate to be able to market last year's large quantities. We have still to see how the marketing of large quantities this year goes, but we are afraid that the prospect next year will be a reduction.

Dr. Bean reminds me that on the assumptions on which these price forecasts are made we should make the qualification that in the middle of 1949 business prospects are beginning to improve to some extent, so that the prospect does not now appear to be as bad for 1949 and 1950 as it appeared to be a few months ago. My qualification would be that the statement as to the price level for July 1950 is perhaps on the low side if the present prospects carry through into the early part of 1950. Employment may not increase significantly, from the indication of the last few months, although the consumer buying power in the U.S. is now at a high level. However, if the current improvement is carried on into 1950, the prices of many farm products may be somewhat higher than those used in the calculation which gave the figure of 220 compared with about 250 now.

# SOME OBSERVATIONS ON THE USE OF THE THEORY OF THE FIRM

W. J. ANDERSON

*University of British Columbia, Vancouver, B.C., Canada*

I WISH to make a few remarks about effectively using and evaluating agricultural resources. In doing so I wish to approach it as a problem in the application of the theory of the firm. I want to limit my discussion to two problems of farm management to which the theory of the firm could make a greater contribution than it has. The first of these is with respect to changes that can be made within a given farm organization and is usually spoken of by theoretical economists as short run changes. In dealing with that I want to make a point on what I believe is a fundamental difference in production conditions faced by a farmer as compared with those faced by many non-agricultural producers. The second problem concerns the quality rating of certain important factors of production used in agriculture.

The short run concept is important in production economics because certain resources which are used are fixed for a period of time, during which they may be used more or less intensively. The significant fact is that as they are used more intensively there should appear a pattern of output which conforms to the law of diminishing returns in its various phases. That is to say, as intensity of operation changes, the gross product does not vary in direct proportion to the amount of the variable factors used. In the ordinary operating range the gross product increases as more of the variable factor is applied, but it grows at a decreasing rate. This is usually thought of in connexion with intensity of land use, but it is true of other factors as well. For example, dairy cows increase output of milk as they are fed more heavily or with more expensive feeds, but the additional feed becomes less and less effective in adding to the output of milk. The feeding period of livestock raised for meat production is another example. As the animals become more nearly mature, it becomes increasingly difficult to add the additional weight.

The examples just given, drawn from experience in agricultural production, illustrate the phenomenon of diminishing returns from which in turn is derived the theory of the firm. This theory shows phases of rising and falling average and marginal cost functions as the

fixed resources of a firm are used more intensively. The most important deduction is that profits reach a maximum when the cost of an additional unit of variable factor equals the value of the additional product produced.

This conclusion emphasizes the two measures of MC and MR, and infers that production managers should adjust the amount of variable resources used with the fixed resources as variable costs and price of output change. It implies that business men need to know the marginal productivity of the variable factors of production over a reasonable operating range. They would need to know this in addition to the average return for the factors of production.

In view of this one might expect that a technique of measurement would have been developed in the business world which would give a more precise measurement of marginal cost on which decisions could be based. The fact is, however, that a good deal of effort has gone into developing and improving technique for calculating average costs and comparatively little towards methods of calculating marginal cost or marginal productivity. Apparently this is left largely to the intuition and judgement of the production manager.

It has been my observation, however, that there is a reason for this apparent lack of concern over marginal cost on the part of accountants for non-agricultural firms. I believe that many non-agricultural firms do not need to contend with diminishing returns in the form that it appears in the preceding examples drawn from agriculture. They are concerned with a special case of the law in which output is directly proportional. Empirical studies of manufacturing firms by Andrews, Nicholls, and Dean seem to substantiate this idea.

The implication, then, is that under actual operating conditions marginal cost is almost constant over a wide range of operations ending at a fairly well-defined point of capacity, where marginal cost goes sharply upwards. A consequence of this type of cost behaviour is that marginal cost and average cost are equal over a practical operating range. This seems quite reasonable. On an assembly line, for instance, output must be approximately in direct proportion to the labour and materials used. But when this is true then an average variable cost figure is a good guide to production decisions in the short run since it is also a marginal cost figure. Perhaps most non-agricultural firms have no real need for anything but average cost figures. The practical aspect, then, is that once a plant is established the production decisions are not difficult—the main task is to maintain sales so as to keep the plant operating as nearly as possible to capacity.

It seems to me, though, that there is an almost fundamental difference between the foregoing and the parallel situation in farm management. It is a fact that the nature of many agricultural factors of production is such that they respond to intensive use according to the general form known as diminishing returns. As a result certain very distinct economic problems arise in farm management which are not encountered in the aforementioned special case. In the first place the short run production decisions are more complicated than they are in the case where output is directly proportional to the variable factors used. Most farms sell their product under market conditions where the product of the individual farm does not affect the price. In the special case referred to, this would provide sufficient incentive to produce to capacity. In farm production there is no such well-defined point of capacity, because land and livestock respond to more intensive use with a gradually decreasing productivity. The point of short run maximum profit, therefore, is shifting according to changes in variable costs and prices of the product. In other words, as short run changes occur in prices and costs, production needs to be adjusted if agricultural resources are to be used to best advantage. There is a real task, therefore, to study carefully certain important productivity functions of livestock and land. Part of this task—and by no means an unimportant part—is to spread the idea of a functional relationship which is not a directly proportional one. That is made more difficult because, as I have mentioned, in many types of production it can be ignored for practical purposes. It seems, though, that the idea should be incorporated into the design of purely physical experiments so that the results from them will be more usable under actual production conditions. Many experiments of this type (e.g. on the application of fertilizer and of labour to land) use only one or two combinations of these two factors that are being tested. Such results are exceedingly unsatisfactory in practical farm management, especially if all the measurements are short of the point of diminishing average returns or even short of diminishing marginal returns, as has sometimes been the case.

The other point arising from this is that the quality rating of certain factors of production (e.g. land and animals) is more involved than simply measuring the total output obtained from them. Output would be a perfectly satisfactory measure were it not for this gradually diminishing response to more intensive use. That is to say, if land responded to capital and labour input in direct proportion, then gross capacity would also measure the quality. When the response is not direct, as with agricultural factors, then quality rating

becomes somewhat more complicated. Then it is necessary to express quality in terms of net production or in terms of both efficiency and gross output. Furthermore, the rating might shift as costs and prices change. I feel, therefore, that both these problems, namely, changes within the farm organization and improvement in quality ratings, would be assisted by a more vigorous application of the theoretical model suggested by the law of diminishing returns.

D. L. MACFARLANE, *Macdonald College*

Might I ask Professor Anderson what is the moral of this marginalism which he advocates for agriculturalists, in the sense of participating in the work of government price-fixing programmes such as Professor Thomas outlined. Our agricultural economists have, in some countries, wittingly or unwittingly made themselves servants of government programmes where these devices you suggest are not employed and where they might appropriately be employed.

W. J. ANDERSON

If I have understood the question correctly, I would answer that I start the analysis where the price-fixing leaves off. In other words, I am stating it from the point of view of the individual farm manager who takes his prices as given, whether they are determined by a free market or by negotiation in the political field. The relative prices, whether negotiated or free-market prices, are in any event going to change from time to time, and that is of significance to the farmer who is faced with this sort of production condition in relation to his land and livestock.

D. L. MACFARLANE

I am in agreement with Professor Anderson's address on practically every point, but I want to question the statement that agricultural economists in this type of work take farm prices as given. Have we no contribution to make in the type of work that has been elaborated by way of helping governments in the determination of prices and of price policy?

W. J. ANDERSON

I think that we have. I was dealing with it from the point of view of the farm manager who, as I said, takes his prices as given. If, on the other hand, we were looking at it from the point of view of agricultural economists seeking in some manner or other to influence government to obtain the optimum relative prices for the best use

of our resources, then I agree, of course, that a knowledge of the kind of functions I have been discussing would certainly assist to that worthwhile end.

K. Skovgaard

I feel that the whole problem has been a little too much generalized. Agricultural production is composed of two main lines of production: utilization of land, where decreasing returns or increasing marginal costs are typical, and livestock production, where the cost-pattern behaves very much like that of other secondary industries. Take, for instance, hog production. A farmer has a hog house accommodating 100 hogs, and within that capacity the marginal cost of hog production may remain fairly constant, as each hog is fed with a given quantity of feed. The same applies also to poultry production, but to a less extent to cattle production, as the latter is more closely connected with the utilization of land. In the cowshed we have two dimensions of expanding production: the number of cows may be increased, giving constant marginal costs, or the milk-yield per cow may be increased by more intensive feeding, giving increasing marginal costs. In both cases, however, the increased production may be interrelated to an increased intensity in feed-production subject to increasing marginal costs.

In land utilization, too, the principle of decreasing returns must be carefully examined. Increasing wheat production by expanding wheat acreage may, to a certain extent, take place at constant marginal costs, while increasing wheat yields per acre fairly soon leads to increasing marginal costs.

For these reasons the difference of the cost-pattern, inside agriculture and manufacturing industries, is far too often over-emphasized, and it seems to me that for several reasons we ought rather to be concerned with the two lines of agricultural production, that is, to distinguish between the primary or land utilization, in which decreasing returns will prevail, and the secondary or livestock production, which economically behaves very much like manufacturing industries.

W. J. Anderson

I do not deny that in certain lines of agricultural production there appears the phenomenon of constant marginal costs. Professor Skovgaard selected one of the very best examples when he suggested hog production, but if it came to a question of raising hogs to higher and higher weights, marginal costs would not be constant. Actually that

is effectively eliminated as a consideration by the fact that the market demands are for hogs within fairly narrow weight limits. But, if in the case of beef production you think of the problem of raising animals to different ages, you would certainly find again that marginal costs are not constant.

L. LOEWE

We have had considerable experience in Israel of this problem, because our land is scarce and we have to try to produce more and more food on a small area. We had to adopt intensive methods of farming, and in like degree the cost of production rose very sharply. I think that the Government can influence the intensities of farming and thereby also the intensity of population by adopting some devices which enable the farmer to grow his crop products or to grow his animal products more or less intensively. When we can afford to give the farmers more land we can also by that method reduce in a large degree the cost of production.

G. L. BURTON

I am anxious to get the correct implication from the exchange between Professor Macfarlane and Professor Anderson. It seems to me that if we accept Professor Anderson's analysis and attempt to apply it to price-fixing, irrespective of the prices which are fixed, the farmers' cost of production will always be equal to that price under two conditions: first, that he knows his own best interest; and second, that economic rent is included as a cost. If that is the case, even though the price is raised the cost of production will still be equal to the price. Am I correct in drawing that inference?

W. J. ANDERSON

Professor Burton has the advantage of having drawn and examined a few curves, and I am not so sure that I can answer without examining them. He is, however, correct that if economic rent is included it is certain the price fixed will always equal the cost of production. There is no denying that long-run phenomenon. My answer to Mr. Macfarlane's question was simply this, that I thought of price-fixing in this way: Suppose we were asking for a greater output, as we did in the War in the case of certain oils and other products, then rising marginal cost would have to be taken into consideration in determining the price that was to be paid to create the necessary incentive.

W. G. Murray

Granting the validity of Professor Anderson's approach, I assume that the gap which exists is the responsibility of the technical agriculturalists, who have not produced the type of data which one would like to have on a physical basis. I would like Professor Anderson to illustrate what he would like them to do, and also indicate to us any work along these lines which he knows of.

W. J. Anderson

First of all I had better say that one of the chief things where work along this line by the technical agriculturist could be of benefit to us is the use of fertilizers on land. A good deal of the experimental work has been done in that field, but the reports published provide results of only one or two combinations. That is a criticism I would make of the technical work, and one of the most important ways in which this kind of technical work could be improved. As another example, there is a fairly good production function in the case of dairy cows, but it is for high-producing dairy cows. Not all farmers have, or ever will have, high-producing dairy cows, and there is room there for the technical agriculturalist to examine at least two more production functions for dairy cows. Those are two examples which come to mind now. The best one that I know is the one of input–output relationships in dairy cows, sometimes known as the Jensen–Woodward experiment.

D. B. Williams

In his paper Professor Anderson reviewed the factors of production in agriculture. Is it not important to consider two other things which need to be superimposed on the analysis he has presented to us? The first point is this question of dynamics. I gathered from the paper that Professor Anderson was a little worried about the failure of the analysis so far presented to provide an effective solution of some of these cost relationships. It seems to me that in order to express those costs more accurately we should try and get beyond a mere dollar or pound evaluation of the costs. Instead of assuming that we get an accurate evaluation of costs in terms of dollars, and particularly of future prices (discounted to the present, if you wish), this factor risk is the all-important one—the dynamic factor is the all-important one. I am reminded of a paper which is buried in the *Journal of Farm Economics* of 1932, in which the writer expressed the view that it was all very well to express cost in dollars, mixing up all the different

kinds of costs which are found on a farm; but, after the analysis, it is just as necessary to go back and see whether that complete mixing of costs expressed in terms of dollars (assuming you do get a correct evaluation in terms of dollars) does not lead to trouble. Those two factors on the dynamic side, and the fact that one must look to the effect of expressing all the many different kinds of costs in terms of a unit of money, need to be superimposed on the static analysis which has been presented.

W. J. ANDERSON

The question is simply this: My analysis here is a static one; superimposed on it is the dynamic situation in which risk plays a large part. I would certainly agree that that was very true. Risk does play a large part, and as a result we find in many cases that the marginal cost is a long way below the value of the marginal product, simply because of this risk factor. The farmer is afraid to take the next step or to use certain factors of production because he is not sure what is going to happen to the price of the product over the next few years. He would rather operate, therefore, at considerably less intensity than he otherwise would. That is certainly an addition to this kind of analysis that, as it is developed, cannot be forgotten.

K. SKOVGAARD

When I spoke earlier I omitted to mention that in the Scandinavian countries a fairly comprehensive physical documentation is available to the farmer for the determination of the degree of intensity or utilization of productive agents. It certainly holds true of the application of fertilizers, for which the production curve is fairly well defined from the results of a substantial number of experiments carried out yearly. But in other fields of production, too, physical data are available where the farmer can decide when to stop the inputs and keep within the economic limit.

M. R. BENEDICT

I would like to raise two questions which I think perhaps supplement Professor Anderson's paper. One is an implication in the paper that he was dealing with a specific enterprise rather than the whole business of the firm. I put the question this way: would Professor Anderson agree that to be realistic in handling that issue he would have to deal with the resistances to production which arise from the opportunities offered by alternative products in the same way as with direct cost? If one were dealing only with one commodity, one

enterprise, then the analysis given could be dealt with in direct terms; but if there is another enterprise which offers possibilities of greater profits, that possibility operates as a resistance to production in the same way as a cash outlay. Secondly, in order to relate the discussion to the question raised elsewhere on policy, it seems to me that the analysis Professor Anderson has indicated really underlies the thing we need from a policy standpoint. We need to know nationally and area by area, the nature of the supply response curve, and it is the aggregation of these individual response curves which makes up the total supply curve. In other words, it may help us to a more realistic approach to price-fixing itself, leaving out, I would hope, the thing that Burton mentioned, namely, the idea of including economic rents as cost.

W. J. ANDERSON

There is not much for me to add to that except to say that the idea of extending the analysis to include several enterprises is a very valuable enrichment of this whole topic. It is true that I developed this thing as though I were talking about one individual enterprise and thinking of the intensity of the use of the factors with it. In the same way two enterprises would compete for factors of production, and it would be a case of equating the value of the marginal product from the factor under consideration in each of the enterprises. In answer to the second part of Professor Benedict's comment, I would certainly agree that precise knowledge of the nature of supply response functions would be invaluable from a price-policy standpoint.

# THE PRINCIPAL PROBLEMS OF ITALIAN AGRICULTURE

M. BANDINI

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FOLLOWING the dislocation of the war period, Italian agriculture has displayed a move to recovery which, without doubt, has been a notable one, maintained in face of the great destruction which was experienced, in the face of losses of livestock, of the deterioration of works of land improvement, and of the lack or scarcity of means of production. The reconstruction has proceeded with a swing which perhaps was too much to hope for in 1945, but not all the problems can be said to have been solved. In particular, the pattern of production which Italian agriculture should be given does not seem as yet to be sufficiently clear. The fact is that it is not a question of simply reconstructing that which the war has destroyed, nor of intensifying agricultural production on the pre-war lines, but rather, in part at least, of reconstructing on a different basis with different productive aims. Italy is becoming related more and more to the international agricultural markets. Before the War she had a largely self-sufficient system of production and was therefore partially isolated from world markets. Now she finds herself faced with new problems, and with the necessity of choosing a new orientation. The main groups of problems which we now want to survey briefly are as follows:

1. Problems of the pattern or direction of production.
2. Improvements and irrigation.
3. Agricultural credit and co-operation.
4. Land ownership and contracts.
5. Problems of emigration.

I have not specifically listed the problem of agricultural labour since all five of the categories specified above involve consideration of it.

1. The pattern of production. The self-sufficient period, which lasted roughly from 1929–42, brought repercussions to Italian agriculture, some favourable and some unfavourable. We consider that on balance it was unfavourable to Italy, although one must realize that it was not only a result of a political decision but was

imposed by certain special situations, notably a lack of openings for emigration—which indeed was experienced by many other countries in the world, although perhaps in a different form and with different characteristics. Italian agriculture would have everything to gain from a policy of free exchange. Nevertheless this does not as yet seem to be fully capable of being achieved, because certain preliminary conditions cannot be said to be satisfied, namely, (*a*) reconstruction of the international system of exchange based on free convertibility of currency; (*b*) the creation of a customs system from which is excluded any form of preference and any recourse to forms of protection other than tax; (*c*) stable customs concessions for our export products.

If we could assume a situation of free exchange, the following lines of development would be indicated for Italian agriculture: (*a*) a reduction in grain production to the most economical acreage, corresponding roughly to an order of magnitude of 60 million quintals, with an importation of 32 to 35 million quintals; (*b*) an extension or intensification of the production of those products in which Italy achieves a lower cost than other countries, namely, wine, oil, citrus fruit, hemp, milk products, and special vegetable products. The position of these products in group (*b*), which in the current system of international exchange are considered to be 'less essential goods', could be greatly improved even in the current system if it were possible to have assured markets. It should also be noted that Italian agricultural economy finds its best integration with that of the countries of north Europe, in particular with Germany. In the period immediately before the War Italy had excessively close economic ties with those countries for political reasons, and as a result neglected or lost other markets which were also important. But these ties, at least to the extent of about 80 per cent., could be justified on the ordinary basis of needs.

Another fact which has to be taken into consideration is that the Italian economic organization, like that of all the countries of western Europe, has to develop in harmony with the application of the E.R.P. plan, and with the general dispositions studied by the O.E.E.C. An examination of the international balance of payments situation shows that there are limits to the importation of products from the Western Hemisphere, such as grain, cotton, secondary cereals, &c., and therefore Italy, like the other countries, has to make a major effort to reduce the need for importing such products. In view of these facts, the choice must be of a middle way between that of an absolutely free exchange and that of self-sufficiency, a

middle way which would permit substantial production in the cereals sector without precluding the development of export products. Whether the Italian agricultural economy will be able to orientate itself more definitely along the lines of free exchanges is a question which must be left for the future to answer.

2. Land improvement and irrigation. The density of the Italian rural population and the scarcity of natural resources in the country have always forced our country to a policy of cultivating every scrap of agricultural land, even those naturally inimical to cultivation. Land improvement is not nowadays limited only to marshy regions or to districts devastated by water or flood, but is also thought of in connexion with hill or mountain regions and, generally speaking, in connexion with all regions extensively cultivated which are capable of more intensive production. The work of land improvement, interrupted by the War, is now getting under way again within the scope of E.R.P. assistance. The regions which have been chosen have been those which offer a rapid return, and in such regions the available means have been concentrated on bringing the works to a rapid conclusion. Works of a private character have been proceeding parallel with these, that is to say, operations designed to improve individual estates which are, in fact, obligatory on the proprietors and can be partially subsidized by the State. The development of irrigation should also be capable of bringing about a rapid increase in agricultural production, especially when related to complementary plans for the utilization of the great lakes at the foot of the mountains.

3. Agricultural credit and co-operation. The problem of agricultural credit is of the greatest importance. The present organization for its provision is structurally satisfactory, but there are not sufficient resources for it to function properly, and charges are also made of a certain clumsiness in the development of its operations. Without incurring large-scale reforms, there is a need to streamline the system and to provide credit to agriculturists under conditions more favourable than at present. Special importance ought to be given to the provision of credit for the acquisition of working capital. Again, the problem of increased mechanization of agriculture should be capable of satisfactory solution by means of special credit banks designed for the purpose.

The development of agricultural co-operation is becoming one of the most urgent problems, especially where the subdivision of agricultural businesses is in process and where there is need to improve quality for internal and export markets. In the field of

orchard cultivation, and also in connexion with the cultivation of vines and olive-trees, &c., there is room for a great deal of improvement with the spread of productive co-operatives and co-operatives concerned with the processing of agricultural products. One particular aspect of rural co-operation which is to-day assuming very great importance is the collective use of transport facilities for small businesses.

4. Landed estates and systems of tenure. A problem which is very much debated to-day in Italy is that of agricultural reform, and in particular those aspects of reform relating to systems of tenure and of ownership of landed property. Opinions are still very much divided, and the most significant discussions will take place in the next few months. According to the ideas which up till now have seemed to prevail in the parliamentary discussions, the reform of contracts and terms of employment and tenure in agriculture should be altered to give a greater stability on the land to labourers, and also a higher remuneration by the allocation to them of a greater share of the agricultural output. On the other hand, one can see that such a tendency would be getting perilously close to a too rigid system of relationships. In the reform of landed property or in the ownership of land there is a desire to limit the size of the large properties and to devote the remainder to the formation of small peasant holdings, making where necessary those preliminary operations required to re-equip the land for the new type of undertaking. Opinions are still divided, and the critics dwell upon the dangers of artificially dividing units which were developed naturally, thereby worsening the conditions of production and creating a lot of small properties with no great vitality.

5. Emigration. The problem of emigration is a basic one for the whole Italian economy. Agriculture is burdened with an excess of labour, which makes it necessary to have recourse to uneconomic forms of regulation aimed at limiting the use of agricultural machinery and inevitably makes for high costs of production. Emigration nowadays is not simply a problem of moving men. It is also a problem involving a change in the property structure of whole regions by means of the movement of capital. The practical possibilities at the moment seem to be in France; there is some scope for emigration of individuals as wage-earners, either permanent or temporary, and in certain regions there is a possibility of colonization. In Canada there have been recent attempts to bring about colonization by isolated families. In Brazil and Argentina individual emigration of agriculturists is not feasible. It is necessary to provide

colonization projects. In Africa there is a possibility of improving the conditions in depressed areas with foreign capital and Italian labour.

*In reply to questions*, Professor BANDINI *continued*:

Dr. Schiller has asked about Italy's capacity to be self-sufficient in agricultural products. Italian agriculture cannot supply all the requirements of the Italian population. We need to import part of our food, especially wheat, and some important industrial raw materials like cotton, oil-seeds, and so on. These will be necessary even in the future. The population density of Italy is too high even for the future possibilities of agricultural science.

In answer to Dr. Kirk, who asked about land reclamation for Italy as a whole, the acreage of land reclamation planned is roughly 1½ million hectares. The population that will be settled thereon is difficult to estimate, but perhaps I might hazard a figure of 200,000 or 300,000 persons. In addition it is hoped that full-time employment will be given to many agricultural workers who at present have work for only six or seven months a year.

Professor Norton asks for an overall figure of what we should require in the way of emigration. My estimate would be that in order to cope with our problem of surplus population we should need an average emigration of about 300,000 to 600,000 units a year.

# PROGRESS OF AGRICULTURAL RECOVERY IN GERMANY

W. KLATT

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TO deal in this Conference with food and farming in Germany is a somewhat difficult undertaking. Even the territory is undefined. Like Caesar writing his *Bellum Gallicum,* the reporter on Germany might start by saying: 'Germania est omnis divisa in partes tres', i.e. Trizonia, the Russian zone, and the enclave of Berlin; not to mention the threefold division of western Germany into three zones of occupation, in future to be controlled by the three High Commissioners of the Western Powers.

It is almost ten years to the day that the seeds were sown for the present division of Germany; and in order to understand the problems lying ahead of the first post-war Government of Germany—or rather western Germany—one has to bear in mind continuously the recent total collapse of economy and society in the centre of Europe, following the most destructive of wars.

Between the two wars, Germany recovered from a defeated country to the strongest political and economic power on the European Continent. In less than seven years her dependence on outside supplies of foodstuffs was reduced from 25 to about 15 per cent. In the case of animal products and fats and oils, home production increased even more than that of field crops. These gains, though achieved by totalitarian methods, were impressive; the foundations for the achievements of the late thirties were, however, laid before Hitler came to power.

When Hitler invaded Poland, Germany was well prepared for war in the sphere of food and farming as well as in other spheres. She entered the War with large reserves, and by economies in the utilization of crops and in livestock population she maintained food consumption at 90 per cent. of pre-war almost up to the end of hostilities. This was achieved in spite of a large increase in population consisting of prisoners of war and foreign workers.

Much of the relatively high standard of consumption was of course due to large-scale requisitioning of food in occupied countries, amounting to as much as 25 million tons flour equivalent in five years of war. An efficient system of distribution, price control,

and rationing secured a reasonably satisfactory level of consumption, which provided the total civilian population with about 2,500 calories in 1943–4. Only in 1945 did non-farm consumption fall to 2,000 calories and less, and normal consumer rations fell as low as 1,600 calories. Nevertheless, the state of health and nutrition was maintained remarkably well throughout the War.

In spite of an almost complete blackout on the statistical position of war-time Germany, the Western Allies were fairly well informed of the conditions of food and farming. In the words of an *ad hoc* Committee on German Food Supplies: 'The decline in total agricultural output was held within relatively narrow limits and comprehensive farm and distribution controls regulated production and its utilization to such an extent that an even higher output of ultimate food energy than before the war was secured. Moreover, imports and requisitions from other countries added from 10 to 15 per cent. to the home food supply.' In the event of Germany's collapse domestic supplies were expected to provide not more than 1,400 calories to the non-farm population in western Germany. To supply 2,000 calories to the urban population, import requirements of the order of 2·5 million tons were expected in the best of circumstances, and as much as 4 million tons if controls were to become partially ineffective.

In spite of this forecast, when the Allies entered Germany planning of the Supreme Headquarters Allied Expeditionary Force was based on the assumption that sufficient food would be produced in Germany to support the entire urban population at an average level of 1,750 calories per person per day during the crop year 1944/5 and that stocks would provide an additional 400 calories per day to urban dwellers. It was decided that no food relief would be provided in Germany except in an extreme urgency, and then only to the extent necessary to prevent disease and such disorder as might endanger or impede military operations or occupation.

Early in 1945 a maximum ration scale of 1,550 calories for the normal consumer was laid down, for a period not exceeding six months. No feeling of revenge entered into these decisions. The overriding consideration was the world supply situation. Unexpected developments inside Germany contributed to the serious state of affairs which developed. Food movements from east to west came to a standstill at the end of the War; 2 million people living in western Berlin had to be provided with food from the west instead of the east; finally, millions of people were expelled from eastern Germany and arrived destitute in the west.

It is not possible to give full details of the ups and downs in the

supply of foodstuffs during the years of occupation, but briefly it can be said that owing to misfortunes of various kinds, such as bad weather, breakdown of controls, maritime strikes in overseas supplying countries throughout the first three years of occupation, rations rarely reached 1,550 calories and often fell below 1,200, sometimes even below 1,000 calories.

The standard of 1,800 calories accepted under the Bevin–Byrnes agreement as the minimum necessary to support a reasonable economic recovery never materialized during the first three years of occupation. In 1947–8 food supplies improved slightly owing largely to increased imports, but the crisis of confidence in the stability of the German economy, in particular in the German currency, prevented a genuine recovery. Outside the bizonal area, owing to small imports and considerable takings by the occupying powers, the food situation was particularly serious. Consequently, the state of nutrition deteriorated slowly. Body-weights declined, and the state of health worsened, particularly at times when rations fell below 1,200 calories. All the characteristics observed in undernourished people by the American nutritionist Ancel Keys, in his starvation experiment, were found in Germany: physical weakness, loss of ambition, fatigue, apathy, depression, and loss of libido.

Up to the middle of 1948 body-weights fell to 80–5 per cent. of minimum standard weights, and a state of chronic depletion was reached which did not permit full output of work. At that time fat and protein contained in the average diet of the non-farm population was 30 and 70 gr. respectively (compared with 110 and 90 gr. in the United Kingdom).

Body-weight records gave somewhat misleading results. If weight is to be maintained with inadequate food, work output must be decreased. This is what happened in Germany without being fully recorded. At the end of the third year of occupation, in the words of a Nutrition Survey, a compromise had been reached in which a loss of weight and lowered body metabolism had made it possible to maintain some degree of activity on a reduced food intake, but only at the expense of work output, which fell considerably below full capacity and pre-war levels. It was the combination of the loss of weight and decreased work which permitted the appearance of a fair nutritional state. In other words, at a reduced level of food intake, metabolism, and work output, a new physiological equilibrium had been created.

To break the vicious circle, every effort had to be made to produce and distribute a maximum supply of food from domestic sources. At pre-war level of production, farming in western Germany pro-

duced 1,700 calories per head per day, or 1,300 calories if related to the post-war population increased by about 8 million refugees. In fact, owing to losses in food production and to inefficiency of the food administration, only 1,000 calories and even less were available for distribution from domestic sources throughout the first three years of occupation. Thus there was no alternative but to insist on maximum production of bread-grains, potatoes, and sugar-beet, on the reduction of acreages under fodder crops, on the limitation of livestock numbers, and on the greatest economy in the utilization of foodstuffs.

Military Government intentions were sometimes misunderstood when the ploughing-up of grassland and the slaughter of livestock were ordered as a temporary expedient under emergency conditions, and unfortunately no use was made of inducements, such as fertilizers, in order to break any passive resistance of the farming community.

Some of the achievements of the production programme existed on paper rather than in reality as long as the illusion of a stable economy and the principle of fixed prices were maintained. As distribution and prices of industrial goods were not controlled fully, prices of raw materials and consumer goods rose by 50 to 100 per cent. above pre-war, while farm prices were kept at about 25 per cent. above pre-war. Thus the value of farm sales declined and farmers could maintain their incomes only through black-market activities. Nothing short of a currency reform could remedy the situation, provided it was combined with a revision of prices and price relations.

Late in June 1948 a uniform currency was introduced in western Germany, followed by another reform in the Russian zone. The economic and political clash which led to the blockade of Berlin has been reported throughout the world and need not be discussed in detail on this occasion. Outside Berlin consumer goods appeared over-night and created the impression of a rapid recovery and return of pre-war prosperity. For a time serious economic disparities remained undisclosed. While industrial controls were lifted immediately after currency reform, food and farming remained strictly controlled. The divergence of views between the Department of Economics and the Department of Food and Agriculture led to a further widening of the price scissors. Nevertheless, a good deal of the recovery was genuine. It was largely due to exceptionally big crops, a very mild winter, and considerably increased imports of foodstuffs, raw materials, and consumer goods. By the end of 1948 the scarcity of goods had changed into a scarcity of money, and the inflation had been replaced by the beginning of a deflation.

Rations of normal consumers rose to 1,850 calories, those of the whole non-farm population to more than 2,000, and total consumption, including non-rationed foods, to 2,400 calories, compared with 2,100 during the previous year. Meat and fat rations were greatly increased, and thus the composition of the diet improved. Consequently body-weights increased, birth- and death-rates returned to pre-war normal, and signs of undernourishment disappeared almost completely. Yet the consumption was only of the same order as in 1943–4 and the diet was considerably more monotonous than during the war.

The improved food supply had immediate effects on industrial output, which rose in the bizonal area from 50 to 80 per cent. of 1936, but less in the French and Russian zones and in Berlin, so that total German output stood at 60 per cent. of 1936. The supply of consumer goods was about half as much as before the war. Against this, the supply of foodstuffs amounted to four-fifths of pre-war.

The improvement was due to both increased domestic and imported supplies. Total supplies rose from 7·5 million tons flour equivalent before currency reform to more than 10 million tons in 1948–9. Of this, about half was home-grown. For the first time concentrated feeding-stuffs were included in the import programme and thus domestic maintenance fodder put to better use than before. The total expense for food and fodder imports rose to almost $900 million compared with less than $600 million previously.

Prices and price relations were corrected in the course of the year. Before the correction, those of potatoes and butter were 70 to 80 per cent. above pre-war, sugar-beet and livestock 15 to 25 per cent. dearer than before the War, and grain stood at the pre-war level. As a result potato production increased far beyond the target, and farmers tended to sell potatoes but to keep grain for feeding purposes.

In the autumn of 1948 grain and meat prices were raised, and a more satisfactory price ratio was thus achieved. At the same time more and more controls were abandoned, and the useful attempts of previous years to evaluate production and delivery by a common denominator, the grain unit, were also given up. Since in former times only the production of arable crops had usually been counted, the introduction of the grain unit as a common denominator had formed a considerable improvement. As production is very uneven throughout the German farming industry, agricultural economists may well return at some later date to this convenient yardstick for purposes of comparing productivity of different farms.

How vulnerable the German farm economy still is became evident

when a few months ago Military Government requested that in future food imports should be sold on the German market against prices calculated at the official rate of exchange instead of being sold at an arbitrary domestic price. The recent drop in world prices made the solution of the problem easy, but devaluation would reverse the situation. In any event, the basic economic problem remains whether Germany, lacking a viable economy, can afford to exist without a minimum of planning, controls, and State interference, and can do without certain buffers, such as subsidies, for the most vulnerable sections of the community. Recent setbacks, such as the cancellation of contracts and the increase of unemployment, suggest that caution is advisable in the removal of controls in a country in which the inequality between the rich and the poor is greater than anywhere else in Europe. At present, in spite of economic recovery, approximately every fifth family is still short of the barest necessities of life, such as a dwelling, some furniture, household goods, and a reasonable supply of foodstuffs, and has little prospect of meeting its minimum needs.

Before giving an outlook into the future I have been asked to insert a few words on land reform, a somewhat controversial subject in Germany to-day. At the Crimea and Moscow Conferences the Allies had agreed on measures of land reform in defeated Germany, in the belief that they would thus remove one of the forces which in the past have contributed towards preparation for war. In the Russian zone, immediately after occupation, expropriation laws were produced spontaneously from above, and all farmers with more than 250 acres of land were dispossessed. Some 10,000 land commissions broke up much of the land, and almost 5 million acres have by now been distributed and divided into more than half a million new units. Another 6 million acres of land belonging to large owners were lost to German land reform, as they were taken over by the Polish administration east of the Oder–Neisse line.

Only one-fifth of the land owned by large farmers was situated in western Germany, and land reform would have been of relatively little importance in the west had it not been for the practical consideration that land was needed badly for the settlement of some of the refugees who had been farmers and farm labourers in the east. While the main political parties have given some support to the principle of land reform much of it has been half-hearted, and the political controversy has been somewhat heated. The right-wing parties are in favour of a very limited land reform, and the Socialists are divided among themselves as to whether the dispossessed land

should be farmed in large units on co-operative lines or divided into small units to be given to small-holders and new settlers.

It appears that the controversy was mainly due to some error of definition. A large farm is not necessarily a large economic unit in the same sense as a large industrial enterprise, characterized by large investment of labour and capital. On the contrary, as a rule it is supplied with less labour and equipment per acre than a small farm. In developed areas with a high density of population the large estate in the past often tended to be economically backward, and its owner was often inclined to preserve an out-of-date way of farming through political means. In a few sentences the problem can only be touched upon, but a comparison between a Danish bacon farm and a Hungarian grain farm might illustrate the position. In the economic sense the 'small' Danish bacon farm forms a larger economic unit than the 'large' Hungarian grain farm. If these economic facts had been recognized generally, the controversy about the ultimate use of farms expropriated under land reform would hardly have arisen, and the dispute between the two main political parties might have lost its sting.

As matters stand now, in the American zone a progressive land levy ranging from 10 per cent. in the case of farms of 250 acres to 90 per cent. in the case of those of more than 4,000 acres is contemplated, while in the British zone no person is to be permitted to own more than 250 acres of land or the equivalent land assessment value. In the French zone the limit is fixed at 375 acres. The total number of farmers likely to be affected in western Germany is 4,000, with an agricultural area of about 1·5 million acres, or about 5 per cent. of the total agricultural area. Thus land reform in western Germany is a matter of somewhat limited importance, but the possibility of the provision of settlements to some of the eastern refugees should not be under-rated.

The amazing speed of Germany's recent recovery might easily deceive the observer inside and outside Germany. The real test is yet to come. Present prosperity is largely based on large-scale foreign loans. The crucial question is whether Germany will achieve a degree of economic viability which will save her from a sudden recession when outside subsidies cease.

Planning estimates for that time have been made by Allied and German agencies; first by the Bizonal Director of Food and Agriculture for a future 'normal year', then for the Committee of European Economic Co-operation, and recently for the Organization of European Economic Co-operation. The latest plan is based on a future

consumption level of 2,700 calories, of which 1,600 calories, or 60 per cent., are to be provided from domestic crops, while the remainder will have to be imported at the cost of almost $1,300 million (at 1948 prices). However, if world market prices should fall below present levels the cost of food imports may be a good deal lower than was estimated at the time in the long-term programme for the Bizonal Area.

Even so it seems doubtful whether this plan can be fulfilled. In western Germany 8 million farmers will have to produce food for themselves and for 23 million town-dwellers, leaving 21 million consumers, or almost half the non-farm population, dependent upon outside supplies. Whilst this forms a safeguard against a new drive towards food self-sufficiency, it is nevertheless a disturbing feature. Unless east–west trade can be expanded to pre-war level and beyond, fierce battles on the export markets of the Western Hemisphere are likely to take place.

Present planning is mainly based on the assumption of an early return to pre-war 'normal'. As the face of continental Europe has been changed beyond recognition, bolder planning and action are likely to be required. Sizeable reserves are still untapped in German farming, particularly in livestock farming and feeding practices. Two-thirds of the agricultural area are used for fodder production. Through the improvement of grassland, the fullest utilization of maintenance fodder, the feeding of livestock on a mixed diet based on a maximum of root crops and silage and a minimum of concentrates, at least one million tons grain equivalent or 250 calories per head per day may be saved for human consumption. A similar amount can be mobilized through the use of 250,000 tractors. If the tractors are used in combination with cultivation equipment, 350,000 horses may become superfluous.

A programme of this kind may produce close on 2,000 calories per head per day, or two-thirds of a future German consumption level. It cannot be Germany's aim to become self-sufficient once again in any of her main foodstuffs, but a programme of systematic intensification of farming is likely to reduce Germany's dependence on outside supplies to manageable proportions.

To this end a certain amount of State planning and interference may be unavoidable, as the changes of supply and demand and prices may be too crude a means of directing production and distribution for the common good, in a country in which the margin of flexibility is small and economic experiments, which richer countries can afford, may be too expensive. While it would be a mistake if the

outside world expected a speedy and full recovery in Germany without continued help from abroad, it would be equally dangerous for Germany to rely on outside help whenever matters take an unfavourable turn.

If I may sum up the lessons learned by scientists and economists in the painful process of recent German recovery, they seem to be threefold: First, those nutritionists have been confirmed in their views who have always held that body-weights and changes in body-weights are not necessarily an accurate index of dietary adequacy of energy-producing foods. Food intake and industrial output have to be recorded simultaneously in order to obtain a complete picture of the state of nutrition of a population living under conditions of under-nourishment.

Secondly, in an economy of scarcity in which the production and distribution of domestic foodstuffs has to be planned and controlled, a common denominator for all agricultural produce is highly desirable. Among those denominators which have been tried the grain unit seems to be the most satisfactory. This unit can also be used with advantage in an uncontrolled economy when farm economists wish to compare productivity and production potential of various farms or farm districts.

Finally, in the discussion about land reform and the advantages of small and large farms it has become clear that the definition by size (acreage) is unsatisfactory, if not misleading. If in future the question of farm sizes is discussed on the assumption that investment of capital and labour, and not acreage, is the determining factor, agreement between opposing views may be possible.

In fact, one might doubt whether the revolution in Russia and the land reform enforced recently in eastern Europe might ever have led to collectivization in intensive farming districts if the error in definition had been recognized at some earlier time. For further discussions on the advantages of various farm sizes and on peasant farming as opposed to large-scale farming, the meaning of the investment of capital and labour on farms of different sizes might usefully be pursued farther at later conferences of this international gathering of agricultural economists.

E. F. NASH, *University College of Wales, Aberystwyth, Wales*

Dr. Klatt said in his conclusions that experience of the grain-value system had shown the usefulness of the measurement in terms of some common unit for various scientific or statistical services. But attempts have actually been made in Germany to use it for more than

that, and to evolve a system of grain-value measurements as a basis for the delivery quota obligations imposed upon the farmers. Although I have not been able to follow the working of this system in detail, my general impression is that it merely introduced a great deal of confusion. I should not have thought that it had contributed at all to improving deliveries. Indeed, it seems very likely that it made it worse. I wonder if Dr. Klatt would agree that whatever the grain-value idea for scientific or statistical purposes, it is not very effective as a system of control. It would probably lead too far to go into the whole question of the method of finding a common denominator, but I think I can say briefly that I never believed the grain unit would be a successful means of improving farm delivery unless it was combined with an inducement scheme. The latter was opposed, unfortunately in my view, in Germany both by Military Government and by most Germans in responsible positions. If one compares the grain unit as it was meant to be applied to deliveries with the system which was in force under the Nazis, I believe that it could have brought improvement if the general tendency had not been against controls of all kinds, because it covered not only the main foodstuffs, the main field crops which were solely controlled by the Nazis, but also animal produce to its full value, as far as we know, and also odd crops like horticultural crops, the produce of vineyards, and so forth.

E. M. H. LLOYD, *Ministry of Food, London, England*

Am I right in understanding from what Dr. Klatt has said that the internal price level of wheat in Germany, which probably means bread grain, is on the same level as the present world market price, or is there still a disparity, and in consequence still a subsidy, in existence?

W. KLATT

I am not certain if my information is entirely up to date. It might be much better for Dr. Hanaü to reply. To the best of my knowledge, however, there is still a slight disparity which cannot be clearly defined as long as it is not quite certain whether grain imports in the next crop year will be sent to Germany at the price which has been agreed under the Wheat Agreement, or whether Germany will in any way be treated more or less favourably. I understand that Germany is likely to come into the orbit of the Wheat Agreement, in which case the margin of disparity between the two price levels will be fairly small; and the common German thought at present is that it

is desirable to bridge the disparity for a limited period of a few months by a subsidy on bread. At the same time there is a desire to abolish the subsidy altogether fairly soon, and it has been worked out by Professor von Dietze, Dr. Hanaü, and various others, that the increase in cost of living will be less than 2 per cent. over all if the whole burden of a price increase is passed on to the ultimate consumer.

DR. SCHILLER

I hope I may be allowed to add a little to this discussion. On the question of grain value, Professor Nash's scepticism is quite justified. This kind of control was tried as a basis of land value, and led to great confusion. We have, however, another experience. We tried this system of grain value for control and delivery in wartime in Hungary, and there it worked quite well, much better than it works now in Germany.

On a point of fact, I would like to make reference to Dr. Klatt's statement about the supply of food to Germany during the War from other countries outside the boundaries of the Reich. I am not sure that what he has said gives a true picture. In considering the food contribution of the occupied territories to the German economy during the war years, one has to differentiate between the consumption of food by the German forces outside Germany's frontiers and the actual import into the territory of the Reich. The latter was only small, and therefore the food supply of the German population living at home and of the foreign workers employed in Germany was met to a large extent from German domestic sources.

W. KLATT

I want to make it clear that in my paper I referred to the total quantity of food from foreign sources, whether requisitioned or imported against payment.

Just one brief remark. I do not want to enter into a discussion on statistics, but I do feel that Professor Schiller has referred to what are historical facts. The figures of what I called imports were meant to be the total surplus of sources outside Germany taken, requisitioned, or paid for by the German Army or by the German Government. They were taken from the statistical handbook which the German Minister of Food and Agriculture handed to the American Military Government at the surrender. I have vetted these figures most carefully, and I would not quote them if I had not convinced

myself that they were all checked and cross-checked and proved, if anything, that the figures were on the conservative side. I have not got all details ready here, but I can say that in one single year, in 1943–4, not less than between 4 and 5 million tons of grain alone were taken from Russia and eastern Polish territories, to say nothing of several hundred thousand tons of meat and oil equivalent, and eggs and other things. All these data were most carefully and meticulously recorded in the statistical record of the former German Minister of Agriculture, and they are taken from there.

# FOOD AND AGRICULTURE IN THE EUROPEAN RECOVERY PROGRAMME


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THE European Recovery Programme, now in its second year, presents a challenge and an opportunity to economists in all fields. Encouraging progress has been made but much remains to be done. The situation continues difficult and the problems are complex. In no field are the problems more intricate or more pressing than in agriculture, which is our major interest here to-day. European agricultural economic problems are so intimately bound up with economic conditions generally in the European Recovery Programme countries, however, that it is only within this broader framework that we can discuss agricultural problems intelligibly.

The basic challenge which the European Recovery Programme is designed to meet is well stated in the Economic Co-operation Act passed by the Congress of the United States in April 1948. It says:

'The restoration or maintenance in European countries of principles of individual liberty, free institutions and genuine independence rests largely upon the establishment of sound economic conditions, stable international economic relationships, and the achievement by the countries of Europe of a healthy economy independent of extraordinary outside assistance.'

Implicit in this statement is a picture of the kind of European economy that is the goal of the E.R.P. In a word, it is an expansionist economy—an economy of expanding production, increasing efficiency with resulting lowering of costs, expanding multilateral trade on a world basis, and high and rising standards of living. An essential feature in this objective is a Europe that is self-supporting internationally and not self-sufficient at a low standard of living.

All of this is in the sharpest possible contrast with the general situation in western Europe as it stood in 1947 when the E.R.P. was proposed—a situation marked by intolerably low levels of consumption, widespread inflation, reduced production, extensive physical destruction, stagnant international trade, and seriously unbalanced international accounts, especially with the dollar area.

I need not dwell on the factors that led up to this situation except to emphasize that many of the causes went far deeper than the grave

immediate destruction and disruption caused by total war. For many years before the War there had been a wearing away of the basic economic advantages which, over the preceding century, had made it possible for western Europe to support a rapidly increasing population at gradually rising standards of living. These advantages, in the main, were a combination of accumulated capital; technological superiority in many lines of production, predominance in the operations of finance, shipping, and other fields relating to international trade; relatively favourable terms of trade as between the food and raw materials that Europe imported and the industrial products which it exported; and, of great importance, a national and international climate of relative freedom of domestic and international economic activity which did in fact serve to bring forth in high degree the economic energies of the peoples of Europe. The War not only greatly accelerated the rate of loss of these advantages, but it also left western Europe with an even larger population than before, and with sharply reduced resources with which to support them.

The post-war imbalance in Europe's international accounts as reported by the Organization for European Economic Co-operation (O.E.E.C.) is an index of the extent to which this economic deterioration had progressed. In 1938 the total imports from all outside sources of the countries participating in the European Recovery Programme were valued—in terms of dollars at 1948 prices—at $13 billion,[1] of which 5·8 billion were from the Western Hemisphere. In 1947, even at sharply reduced levels of living, total imports amounted to $12½ billion, of which 9 billion came from the Western Hemisphere. On the earning side, total exports from the area dropped from about $8 billion in 1938 to 5·4 billion in 1947. Of this, about 2½ billion in 1938 and 1·75 billion in 1947 were exports to the Western Hemisphere. Meanwhile, invisible items in the balance of payments, which had shown a credit balance of about $2 billion annually at prices then current before the War, showed up as a net deficit of about three-quarters of a billion in 1947.

There is obviously a long and difficult road to be covered in moving from the low point of 1947 to the high goals I have described. There are many who say that the task is an impossible one, especially in the limited time period set for American assistance to the programme. Yet I would say that all of those closest to the programme—Europeans and Americans alike—are unanimous in their belief that most if not all of the job can be done in the time available, if everyone concerned plays his part with full energy, imagination, and vigour.

[1] Billion (U.S.) equals a thousand millions.

Some of the main elements of action are clear and work is in progress on them. A first necessity was the elimination of war-born deficiencies in consumption goods, raw materials, production plants, and equipment, and the correction of monetary and other general economic disorder. Much of this has been accomplished in the first year of the programme. Production indexes on the industrial side, at least, are now well above pre-war levels in most cases. Savings and investments are at high levels in most of the countries. Action is beginning to be taken to bring the benefits of spectacular recent developments in technology into widespread use in European industry and agriculture. On the international trade side the concept has gained ground in Europe that overseas suppliers of raw materials must be prosperous in order to be good customers for manufactured items. An aggressive attack is being made to liberalize trade and to construct a basis for the convertibility of currencies so as to remove the shackles of restriction on the flow of goods. Finally, direct measures are being sponsored to increase dollar earnings as a means of obtaining needed imports from the Western Hemisphere. The forward movement that these elements represent has to be pushed aggressively, however, if the overall objectives of the European Recovery Programme are to be attained.

The O.E.E.C. has played a major role in these developments. The mere fact that it is possible for all of the participating countries to lay their plans side by side and to compare and correlate them has been a facilitating factor in promoting European economic recovery. An important part of the O.E.E.C. is its Food and Agriculture Committee and sub-committees.

Behind the individual and co-operative efforts of the countries participating in the E.R.P. is the economic assistance offered by the United States under the terms of the Economic Co-operation Act. The principal forms of aid provided in this legislation are:

1. Direct grants and loans to cover immediate needs from the dollar area for consumption goods, industrial and agricultural raw materials, and capital items. Procurement of about $5½ billion worth of goods and services was authorized under this heading in the first fifteen months of the programme.
2. Special United States contributions to support increased activity in intra-European trade. This form of dollar aid is given on condition that the recipient country extends grants in its own currency to its debtors among the other participating

countries. About $675 million were made available for this purpose up to June 30, 1949.

3. Counterpart funds which match dollar grants and provide large amounts of local European currencies for use by the participating governments in economic stabilization, investment, and development activities.
4. Technical assistance funds which make it possible to act on a large scale to bring American technicians and technology to Europe or to send European technicians to study in the United States.

This, then, is the general picture. A new balance for the European economy must be found to replace the old. For even if the pre-war balance could be completely restored it would not be enough to meet the needs of the new situation. Moreover, the new balance must be found quickly. Perhaps the most valuable general contribution which American aid under the E.R.P. is making to western Europe is giving it time in which to re-establish its economic system in an orderly manner. In effect, the United States has undertaken for a limited period of time to help fill the economic gap left by the lost European resources. This period is scheduled to run out on June 30, 1952. The volume of United States assistance is expected to be reduced from year to year until then. Thus the time available to find a satisfactory new balance is short indeed.

In a sense it is misleading to talk about finding a 'new' balance. Whatever is done or not done, there will be a balance in the long run between European output and consumption. The real question is at which level this balance will be struck in terms of the standard of living to be achieved by the people of Europe.

So much for a fleeting sketch of the general background. Let us now take a more specific look at the food and agricultural aspects of the European Recovery Programme.

In dealing with the question of population and food needs, our point of departure is the population to be fed. Notwithstanding the tremendous loss of life during the War, the population in the countries participating in the European Recovery Programme is now 11 per cent. larger than the average for the five-year period 1934–8, and it is expected to be 14 per cent. larger by 1952–3. Thus the food supply in 1952–3 will have to be 14 per cent. larger than the pre-war average to provide for a pre-war level *per capita*. It is pertinent to add also that approximately one-third of the food consumed during the pre-war period was imported from outside sources. Moreover, pre-war levels

of food consumption are not a satisfactory standard in many countries, either from a nutritional point of view or from the standpoint of what people consider to be adequate. For our purpose here, however, the pre-war consumption level is a convenient bench-mark for the examination of some of the main elements in the problems of agricultural production and of needed food supplies.

The central problem is to provide a minimum of 14 per cent. more food than was available before the War. This imposes the necessity of taking advantage of every possible opportunity for increasing European agricultural production within appropriate cost limitations, as well as greatly expanding the export of commodities that will provide foreign exchange to pay for needed food imports. The optimum degree of self-sufficiency in food production will be dependent upon comparative costs of marginal domestic production and imports, in that high costs of food would weaken the competitive position of industries producing for export. Thus the question of allocation of resources between agriculture and other economic sectors is involved.

With this bench-mark on the food-requirements side, let us turn to the question of agricultural production possibilities and limitations. Last fall the E.R.P. countries submitted long-term production plans to the O.E.E.C. These plans dealt with agriculture as one segment of the national economies. 'Long-term' as used here refers to the period through 1952–3, the first year following the termination of Marshall Plan aid. These agricultural plans were prepared independently in the several countries in accordance with prescribed procedures and assumptions, with the general objective of showing how each nation considered that it could best become independent of extraordinary external financial aid by July 1, 1952. Naturally, these plans were only first approximations. They stand in need of considerable adjustment to make them consistent with one another in respect to intra-European trade and trade with other parts of the world. There are other equally important though less obvious inconsistencies in the production patterns, considered from the standpoints of economic use of production resources and of specialization by countries. Recognizing these limitations, it is informative to look at these plans or production goals taken together for the entire E.R.P. area as one indication of the possibilities of increased agricultural production during the next four years.

According to these plans the total area of land used for agricultural purposes, including permanent pasture but excluding rough grazing, would increase by 1952 to 4 per cent. above the pre-war level. The

area under tillage would increase to 11 per cent. above the pre-war average and the area in rotation pasture to 12 per cent., while the area in permanent pasture would decline by 10 per cent. Thus there would be some increase in intensity of land use. The actual expansion in agricultural area would be small, however, except in a few countries.

More meaningful are the contemplated changes in the areas in individual crops. The 1952 proposed areas in some major crops expressed as percentages of pre-war are: bread-grains 105, coarse grains 105, potatoes 110, sugar-beets 130, and oil-seeds 235. These increases are not general for all countries; actually, the totals are heavily influenced by changes in a few countries.

Turkey and the United Kingdom would account for most of the increase in the area of cereals, while the three other major producers —France, Italy, and western Germany—would not regain their pre-war average areas. Western Germany and the United Kingdom would account for most of the increased area in potatoes. The increase for sugar-beets is much more general throughout the region. Large increases in oil-seed areas are planned in Turkey, France, and the United Kingdom.

The plans under discussion bring out the highly significant point that increases in the production of basic crops are expected to result largely from increased yields rather than from expanded areas. The goals for yields by 1952 as compared with the pre-war average for the principal crops are as follows: bread-grains 109 per cent., coarse grains 109 per cent., and potatoes 117 per cent. Moreover, these regional averages fail to reflect the full improvement in yields contemplated, because of the relatively greater area increase in certain countries, notably Turkey, in which yields are well below the average for the region as a whole.

As a major part of the effort to bring about these increases in crop yields, the plans call for greatly increased use of fertilizers. The planned increases by 1952 over the pre-war average would be as follows: nitrogen 90 per cent., potash 77 per cent., and phosphates 82 per cent. Considerable increases have already taken place. During the 1948–9 season, the use of fertilizers is reported to have expanded to 42 per cent. above the pre-war average in the case of nitrogen, 34 per cent. for potash, and 42 per cent. for phosphates.

A rapid development in farm mechanization, already in progress, is expected to continue between now and 1952. By that time it is proposed that the number of tractors on farms should be approximately five times the pre-war average. If we may judge by American experience, mechanization will increase the productivity of labour

on farms adapted to the use of machinery and, perhaps more important, it will reduce requirements of feed for livestock and thus permit more resources to be devoted to the feeding of meat and milk animals as well as to the production of food for direct human consumption.

As to livestock, the proposed numbers of animals on farms in 1952–3 in relation to the pre-war averages are as follows: all cattle 109 per cent., milk cows 100 per cent., pigs 108 per cent., sheep 101 per cent., and poultry 115 per cent. The output of livestock products would follow livestock numbers fairly closely, although some increase in milk production per cow is contemplated. In general, the pre-war proportions of the major classes of livestock would be restored. The greatest increases from present levels would be in pigs and poultry, which were most adversely affected by war-time and post-war feed shortages.

In connexion with these proposed changes in livestock numbers it is interesting to note that net imports of coarse grains, according to the plans, would be about 1½ million metric tons, or approximately 15 per cent. less than the pre-war average. Greater dependence would be placed on home-grown feed, including improved meadows and pastures.

In appraising these production plans there are two broad types of considerations that may be distinguished. The first relates to the rate of increased production to be achieved between now and 1952. Is this increased production feasible, and is it large enough to meet the needs of the E.R.P. countries? What measures will be necessary to bring it about, and are these measures being taken? The second set of considerations relates to the direction taken in the proposed increases. Is the commodity pattern indicated for each country individually and for all countries considered together the one that will contribute the most towards the attainment of the objectives of E.R.P.?

The realization of the production increases contemplated will require a very rapid advance in farm technology, including mechanization, increased use of fertilizers, better seed, improved and expanded pest controls, and a general improvement in farm organization and production practices. In general, no serious difficulty is envisaged in expanding the area in crops to the extent called for in the plans. The shifts as between crops may present somewhat greater problems.

The technological improvements on which greatest dependence is being placed for increasing yields and volume of production can only come about, however, as the result of a great effort by agricultural

leaders and by the millions of farmers who collectively account for the agricultural production of western Europe. But improvements in technology are the least controversial aspects of the production plans, and can be initiated immediately on the basis of available research material. Technological improvements in the economic sense are desirable under any conceivable economic conditions, since they are the means of lowering costs and of increasing output from existing resources.

In general, two conditions must exist if the production increases are to be realized. First, farmers must find it to their economic advantage to make the required investments. This is primarily a question of prices of products in relation to wages of farm labour and prices of equipment and supplies used in production. Secondly, there is need for an adequate organization to reach millions of farmers with the economic and technical information which they must apply in order to do what is expected of them.

The current situation with respect to price and income incentives varies considerably from country to country. In some countries prices are fixed by government decree, and attempts have been made to establish price relationships that will provide the incentives deemed necessary for the achievement of the production plans. At the other extreme are those countries with uncontrolled price economies in which dependence is placed entirely upon the conventional economic forces of supply and demand. In the latter countries production plans or goals can only be forecasts of what will actually happen in response to the economic conditions that prevail without deliberate government intervention.

In countries where prices are established by government decree, considerations other than the attainment of production goals have often played a part in the determination of what the official prices should be. In certain instances, for example, the price of bread has been kept low because of the importance of this commodity in the diet and consequently in the cost of living of the worker. The producer of bread-grains may or may not have been insulated by subsidies from the effects of this policy. The Production Plans and Programmes Sub-Committee of the Food and Agriculture Committee of O.E.E.C. is assembling information on price relationships among the different agricultural commodities in each country as well as between argicultural products and materials used in production. These data will permit an analysis of existing price incentives relative to the production goals. It has already been observed that the current relationships among the prices of different commodities

vary greatly from country to country and that the relationships between current and pre-war prices vary greatly between commodities in the same countries. It seems reasonably clear that some rather substantial adjustments in price relationships will be necessary for the accomplishment of the production plans.

Another question has to do with the general relationships between prices of agricultural products and prices of the elements entering into production. For nearly a year now prices of agricultural products have shown a tendency to decline. This has been mainly the result of the relatively good European harvest in 1948, and the ability, with American aid, to continue a high level of imports. On the other hand, materials of production such as farm machinery and fertilizers have not experienced corresponding price reductions. The net result is that agricultural production has become less profitable. In the years immediately ahead this may become a problem of some importance in the expansion of output. It may still be profitable to increase production, but a decline in gross farm income may make it more difficult for the farmer to find the capital necessary to make investments to expand his agricultural plant or improve his farm practices.

Turning now to the question of knowledge of improved practices and the means for disseminating this knowledge to farmers, it seems clear that much can and should be done. There are countries which have rather highly developed programmes of research and educational work, including demonstrations of improved farm practices. There are also countries where research work in agriculture is on a very limited scale and, even more serious, there is little provision for bringing the results of such research as is being done to the farmers whom the research is presumably intended to benefit. To an American who is familiar with the important role played by research and extension services in the increased productivity of American agriculture during the past ten years it seems clearly evident that there is room for a great deal of improvement in most E.R.P. countries in this direction. It is difficult to see how even with adequate economic incentives, the production plans can be achieved without a large expansion in advisory or extension services. Fortunately there are evidences that this need has been recognized by at least some of the governments of the participating countries. There can be no reasonable doubt as to the desirability of giving stronger support to this work in most countries.

Let us look now at the question of the direction that agricultural production should take. Here we enter a field in which the considera-

tions are more complicated and the answers more difficult. Economists would certainly agree as to the desirability of considerable specialization within Europe and between Europe and other parts of the world in accordance with the well-known principle of comparative advantage. Europe provides a tremendous market for agricultural products and has a great diversity of agricultural resources. Certainly, great economies are possible if the productive use of these resources were organized on the basis of a regional specialization comparable to that found in the United States. There are numerous obstacles, however, in the way of such specialization. Among the most evident of these obstacles are the imbalance in trade among the various countries of Europe, the inconvertibility of currencies, and the various restrictions imposed in order to balance trade, largely on a bilateral basis. Similar considerations relate to trade between Europe and other parts of the world, especially the dollar areas. There are other obstacles to regional specialization that have developed over a period of years and which have been designed to protect producers or to provide a high degree of national self-sufficiency with respect to some or all agricultural commodities. The proper approach seems to be one of going as far as possible in removing obstacles to trade and thereby gaining the economic advantages of specialization and lower production costs.

While there are many problems relating to intra-European trade in agricultural products, perhaps the most critical problem is that of the future trade between Europe and the dollar area. The level of imports from the Western Hemisphere will not only have important effects upon the level of food consumption, but will also profoundly affect the kind of agricultural production that is most economical for Europe.

Western Europe has long depended heavily upon the Western Hemisphere and eastern Europe for feed supplies in order to maintain a high level of livestock production. There is considerable uncertainty as to whether feed supplies from eastern Europe will again be available in the pre-war volume. With respect to the western European trade with the Western Hemisphere, there is serious question as to what level of feed imports will be possible with the level of dollar earnings achieved after American aid comes to an end. The E.R.P. countries may be able to expand feed production to some extent. This is contemplated in their present plans. Without imports approximating the pre-war level, however, output of livestock products cannot be expected to increase in proportion to the population, and it seems unlikely that this can be offset by increased purchases of livestock products from overseas.

This raises the question of the level of food consumption that the E.R.P. countries will be able to afford following the termination of American aid. It is not only a matter of calories, but also of the source of the calories, of nutrients other than calories, and of the general quality and palatability of the diet. The answer at present can be conditional only—that is, the level and quality of the food supply will be dependent upon the success of the E.R.P. countries in increasing the productivity of their agriculture and upon the progress in liberalizing and expanding trade in industrial as well as in agricultural products as a means of obtaining needed food and feed imports.

There are evidences in the existing production plans that difficulties foreseen in maintaining a high level of world trade are already directing production into channels which might turn out to be uneconomic under conditions of reasonably free trade. It is proposed, for example, to increase sugar production to 37 per cent. above the pre-war level by 1952. While the sugar-beet crop makes a valuable contribution to the livestock industry in the form of by-product feed, there are adequate supplies of sugar available for export from tropical areas in which production costs are low and production alternatives are limited. Similarly, a great effort is being made to expand the production of oil-seeds which, in northern Europe at least, have been found to be a somewhat uncertain crop which farmers are reluctant to grow except under the incentive of rather large subsidies. Those responsible for planning agricultural production must take the responsibility for higher costs of food and the need for continued subsidies or protection if they support measures to attain a higher degree of self-sufficiency in such crops. They may feel, however, that there is no alternative unless there is assurance that some of the present trade and payment difficulties will be removed.

Another serious problem of production planning arises in the case of countries that are traditionally dependent upon European markets for their agricultural export surpluses. Denmark, the Netherlands, and Ireland normally export livestock products to the United Kingdom and western Germany. To reach the level of livestock production and export contemplated in their plans, they must have feedstuffs from the dollar areas. The only means they have of obtaining sufficient dollars to pay for these feedstuffs is by converting the proceeds of their intra-European trade into dollars.

The O.E.E.C. reached the conclusion some months ago, however, that the participating countries should not plan on the assumption that they can continue to earn gold or dollars from one another.

If this is to be rigorously followed, these livestock-producing countries will have to re-orient their plans to the lower level of livestock production that can be sustained with domestic feed production plus feed imports from non-dollar sources. This may pose an intolerable handicap on the economies of the countries affected.

Similarly, a problem arises in the case of countries like Italy and Greece which traditionally export fruits and vegetables to the countries of northern Europe. The latter countries state that they cannot afford to buy all they would like to consume or as much as they formerly bought of these products, which they class as 'luxuries' or 'semi-luxuries', unless productivity and income levels can be improved beyond present expectations. The producing countries in question may be faced with the unpleasant necessity of adjusting to alternative types of self-sufficiency production in which their relative advantage may be less, thus depriving consumers of products which they would like to have and which would be nutritionally beneficial.

These are examples of the problems which must be met, not in 1952, but in the interim years which are available for putting European agriculture on a basis such that it can continue forward after 1952 without a major re-orientation. It is a challenge for agricultural economists not only in Europe but in other parts of the world as well. Some of the problems extend beyond the usual scope of activity of agricultural workers, but those responsible for planning general economic policies affecting production and trade must be made aware of the consequences in the food and agricultural field of the broad economic judgements that are made and the administrative decisions that are taken.

This, then, is the broad picture in general terms and with specific reference to agriculture. How do the present plans and activities in the agricultural field measure up against the grave challenge of the difficult overall economic situation in western Europe? A quick answer to this basic question at this stage of preliminary consideration must necessarily be partly in terms of paradoxes as regards consumption, production, and trade.

On consumption, as I have said, serious questions exist as to whether western Europe will be able to afford a diet comparable to that of the pre-war period. Yet there is a strong desire, only partially reflected in present plans, not only to restore but to improve on this pre-war consumption level.

Again, present agricultural production plans are very ambitious

indeed in relation to present programmes for economic incentives and technological development.

On the other hand, if strong incentives and the best of modern technology were widely applied in European agriculture, the potentiality for increased production would seem to be in excess of present goals.

In terms of trading possibilities the contemplated pattern of agricultural production as visualized in present plans is again optimistic. In other words, as analysed by the O.E.E.C., several of the countries in their present agricultural plans expect to sell more of certain high-grade products to other countries than those countries plan to buy or appear to be able to buy. At the same time, many countries appear to be counting on agricultural imports from eastern Europe in excess of probable availabilities there and on imports from Western Hemisphere sources in excess of their prospective ability to pay for such imports.

Conversely, however, as I have indicated, present plans clearly contemplate expansion of production of many commodities solely for self-sufficiency and dollar-saving purposes to levels that are unwarranted under any reasonable concept of comparative advantage. Fulfilment or expansion of these autarchial elements in the programmes could only lead to a withering of international trade and a lowering of standards of living.

While what I have been saying may give the impression that the problem is so complex and includes so many decisions to be made outside the agricultural field that the agricultural economist is left in a somewhat helpless position, I do not believe this to be the case at all. What is needed basically in agriculture is a great effort in the application of the latest scientific advances and of time-honoured and valid principles of production economics. It is a problem of using land, labour, and related resources in such a manner that greater efficiency is attained as a concomitant part of an expanded volume of production. This includes the proper choice of enterprises as well as a general increase in the intensity of resource utilization. Increased production at lower costs will provide more food for the European consumer and thus reduce the need for imports or permit a higher level of consumption; it will also lower the cost of living and, consequently, the cost of industrial production, thus aiding in the expansion of exports that will increase the foreign exchange available to cover the necessary imports. Thus we come back to a subject that is familiar to all of you—in fact, so familiar that I feel almost apologetic for calling it to your attention. I feel justified in doing

so, however, because in a situation like the present there is a danger of overlooking the obvious and familiar basic economic principles that have been the major concern of all of us for many years. I should like to leave the thought and the challenge with you that agricultural economists are already familiar with the tools which, if properly applied, can make a tremendous contribution to the restoration of a prosperous and self-sustaining economy in Europe. It is a challenge that I believe we should accept and which I think we have the resources and ability to meet.

The challenge is primarily one for the people of Europe, but the people of the United States are vitally interested in the success of the undertaking. This interest is evidenced in tangible form by the aid that is being provided to all European nations that have chosen to take part in the joint effort. In the first place, funds are provided to keep the necessary imports of food coming in while production and exports are being increased. Purchases of feed, machinery, and other types of agricultural equipment and supplies are being financed to assist in adjusting and expanding agricultural production. Technical assistance funds are bringing the scientific progress in America and elsewhere to the aid of the European farmer. Local currency counterpart funds are making it possible for governments to increase the capital investment in agriculture as well as to expand research and educational services for the farmer. The economic resources are not lacking. Success will depend on the vigour and intelligence of the leadership, as well as upon the efforts of millions of farmers.

E. F. Nash

I should like first of all to express my own thanks to Dr. Thibodeaux for his most comprehensive and illuminating survey of the problems of European Economic Co-operation in regard to Food and Agriculture. I should like to make one comment and to ask one question. I was particularly interested in the remarks which Dr. Thibodeaux had to make on the tendency which he discerned in the plans of the European countries to encourage a degree of self-sufficiency in certain products which he thought might prove to be undesirable in any reasonably liberal world economy. I refer more especially to what he said about sugar production. I have been called upon several times recently to express opinions in regard to the correct policy for agricultural prices in western Germany. The question of the price of sugar-beet in relation to the prices of other products is one of the difficult issues in that country. If western German prices are to be brought into parity with the prices of

products on the world market, the principal changes that would have to be made in the present level of German agricultural prices would be a rise in the price of grains and a fall in the price of sugar-beet. I have devoted a fair amount of thought to the question: if we accept the view that it would be justifiable to raise the price of grain in Germany and bring it into parity with the world market price, is there any argument for not following the same course in regard to sugar and lowering the price of sugar-beet to bring it into conformity with the import price of sugar? I have not been able to convince myself that there is a valid argument for not doing so. It may be that the existence of unbalanced international accounts, which affect every European country, and the persistence of the dollar problem, weakens the traditional argument for bringing internal prices into line with external prices. But I cannot see that that condition justifies a differential assistance to sugar-beet. It may justify the maintenance of higher prices all round in Germany than outside Germany, but I do not see that it justifies the maintenance of a higher price for sugar-beet if you are at the same time content with a price for grain which approximates to the external price. I do not know if anybody can suggest an argument bearing on this point which I have overlooked. That is my comment. My question has regard to one point which I do not think Dr. Thibodeaux mentioned. It struck me as he was speaking that one of the changes that are necessary to facilitate the establishment of a viable European economy is the development of non-dollar sources of supply for those foods for which European dependence upon the Western Hemisphere is at present so great. Does not the successful attainment of the European programme demand an effort to develop production in the other overseas countries? I think that if you made a comparison of world production index-numbers before and after the First World War with the situation before and after the Second World War, you would find that whereas after the First World War the other overseas exporting countries had greatly increased their production and exports, in the case of the Second World War there has been a most striking increase in the production and exports of North America, but very little increase in production and export anywhere else. What are the reasons for this contrast I do not know, but it is a fact which seems to merit careful attention.

B. H. Thibodeaux

If I may, I should like to make a suggestion about the discussion. It would be interesting to extend our discussion beyond the E.C.A.

as such and to cover also its counterpart organization on the European side, that is, the O.E.E.C. We have here several persons who are directly connected with the food and agricultural work of the O.E.E.C. If there are questions relating to that organization, as I hope there will be, I should like to refer them to Mr. Philip Barter, Agricultural Counsellor of the O.E.E.C. Secretariat; Professor Bandini, Vice-Chairman of the O.E.E.C. Food and Agriculture Committee; and Mr. E. H. Lloyd, Chairman of one of the key sub-committees of the O.E.E.C. Food and Agriculture Committee.

In reference to Mr. Nash's comment, I, too, have been puzzled by the seemingly irrational price structures that have been created by official edict or otherwise—seemingly irrational not only when we examine the prices of the same commodity in different countries but also when we consider the price relationships for various commodities in the same country. I am not aware that the price situation as described for Germany by Mr. Nash is deliberately intended to cause an expansion of sugar-beets in relation to wheat, but I agree with him that the effect would be precisely that if German farmers were responsive to prices and price relationships. I agree with the general tenor of his comment.

In answer to his question, it is to be hoped and expected that production will recover in pre-war sources that are still prostrate from war and the results of war destruction. Likewise, there is a great deal of emphasis at present in the development of the overseas territories of the countries participating in the European Recovery Programme. The E.C.A. policy is to support such development to the extent that production can take place on an economic basis and can stand the breath of competition under conditions of reasonably free trade. We hope, however, that the main objective in overseas development will not be a blind effort to save dollars and produce commodities already in over-abundant world supply, but rather to concentrate on the production of commodities in short world supply. Moreover, in view of the dollar shortage, it is hoped that emphasis will be put on the production of dollar-earning commodities.

J. F. Booth

As one representing an exporting country I have followed Dr. Thibodeaux's paper with very great interest and appreciation. I would like to take advantage of this opportunity in his presence to express appreciation to him and to the United States Government, for the very generous consideration they have given to my country, Canada,

in connexion with purchases of food supplies and other agricultural materials for Europe during the past year or so under the E.C.A. programme. This consideration, amounting as I recall to something like three-quarters of a billion dollars, has done a great deal to tide over our very difficult triangular balance of payments with the United States and the United Kingdom, and of course has helped us to contribute our surplus food to the needs of Europe. We are a little bit concerned at the moment about one aspect of the recovery programme, namely, the provision in the Act which states that where there is a surplus of a certain product in the United States no allocation of funds may be made to purchase products from other countries. This is a matter of some concern to us at the moment, but it does not detract from our appreciation of the assistance that has been given.

I would like to comment on a point made by Dr. Thibodeaux. There is concern in Canada, as I am sure there is among the farmers of the United States, of Australia, of New Zealand, and possibly other exporting countries, that the self-sufficiency programme in Europe may lead to a reduction of international trade, and have a serious effect on the economics of exporting countries. Now what I am really asking Dr. Thibodeaux for at the moment is some reassurance on that point. As I interpret the figures and picture he presented, the plan contemplates only an increase of about 4 per cent. of overall acreage, something like 5 per cent. in grains, and an increase of total productivity due to greater efficiency of around 10 per cent. That would not seem to indicate, considering the increase in population and the higher standard of living which we hope will be obtained, a serious effect on the exports of the overseas food-producing countries. The great question, if I interpret his remarks correctly, concerns the ability of European countries to increase their own production, industrial production in the main, sufficiently to enable them to buy the products from the overseas countries. I wonder if Dr. Thibodeaux would care to expand at all on this point or give us some assurance as to whether or not the interpretation that I have placed on his remarks is correct?

B. H. Thibodeaux

In supplementation of Dr. Booth's first point, I might explain briefly for the general information of the group that E.C.A. funds are not restricted to the purchase of American commodities only, but are used for 'off-shore' procurement as well. There is a stipulation in the basic legislation, however, that E.C.A. funds will not be

used to finance the off-shore procurement of commodities officially declared to be in surplus in the United States except under very special circumstances. This stipulation is generally accepted as fair, in that American farmers themselves have helped to furnish the tax revenues that support the E.C.A. Programme.

We recognize and appreciate the situation in other exporting countries in which there are surpluses of the same commodities as in the United States. It seems to me, however, that agricultural surpluses, in the sense in which we are discussing them, constitute a problem that transcends the E.C.A. as such and must be dealt with through other means, such as the Wheat Agreement or other appropriate commodity or more general arrangements.

And now in respect to Dr. Booth's second point, relating to the 'self-sufficiency' aspects of the agricultural production programme of the countries participating in the European Recovery Programme. I should like to emphasize again, as I did earlier this morning and on other occasions, that the E.C.A. is not supporting a self-sufficiency or uneconomic autarchic programme in agricultural production in Europe; rather, E.C.A. facilities are being extended to support and promoted an all-out programme of agricultural recovery and improvement based upon enhanced production efficiency and the maximum economic utilization of agricultural resources. This objective encompasses the specific considerations of agricultural production adjustments and practices that we discussed earlier. I am pleased to say that this positive approach that I have described is also the one to which the O.E.E.C. subscribes.

Dr. Booth is correct in his understanding that the increases in European agricultural production contemplated at present will still leave western Europe in a food-deficit position and that food imports in 1952 will have to be as large as, or even larger than, pre-war if the western European population is to have as high a level of food supplies *per capita* as was the case pre-war.

But the critical problem is, how will Europe pay for its needed food imports following the termination of E.C.A. aid? Here we get again to the problems of imbalance of trade and inconvertibility of currencies that we discussed earlier. So far as trade with the Western Hemisphere is concerned, Europe will have to expand her earnings of dollars by increased exports, by tourism, and by other means, or face a diminution in levels of consumption, in that supplies may not be available from other sources in the quantities needed. And here is the danger. The inability of Europe to earn sufficient foreign exchange to finance needed food imports may force the adoption of

self-sufficiency in European agricultural production in the same manner (to borrow a phrase from a report by F. F. Hill of Cornell) that unemployed industrial workers during depressions cultivate backyard gardens because of inability to purchase at the grocery store. It is to the interest of Europe's normal trading partners as well as of Europe itself that she should not be in that unfortunate predicament. The economic welfare of the world would be seriously impaired by a withering of international trade based upon comparative advantage and regional specialization in production. A successful outcome of the European Recovery Programme will go far in preventing such an unfortunate development. My belief in the success of that programme is the only assurance that I can give to Dr. Booth in answer to the fear that he voiced.

E. M. H. Lloyd

I would like to add my sincere tribute to the masterly way in which Dr. Thibodeaux has introduced this subject, and particularly to the extremely well-balanced and proportioned analysis which he has made of it. The main point that baffles agricultural economists in this field is, first of all, to reconcile national policies and national planning with a western European approach, and secondly, to integrate the western European picture with the world picture. This is, of course, closely related to the vexed question which we have been discussing for so long, namely, whether agriculture flourishes best under a régime of free market prices and *laissez-faire* and the orthodox doctrine of comparative costs, or whether and to what extent governments are justified in intervening with the free-play of market forces, by guaranteed prices, by price support measures, by subsidies, and by quotas and tariffs on imports. It seems to me that if one had somebody looking at this picture from an international point of view, he would notice that we all tend to defend the measures taken in our own countries to support and protect their own producers, and that we all criticize the measures taken by other countries on the ground that they are uneconomic interferences with the natural course of economic development. I would like to ask Dr. Thibodeaux if he could supplement his diagnosis of the situation in Europe, which is absolutely first-class, by a short picture of what he regards as probable developments and long-term targets of production in North America. One of the greatest difficulties in O.E.E.C. is to know what assumption to make about the long-term production goals and price-support policies in the United States. And what is likely to be United States tariff policy? Is there likely

to be a free market between Canada and the United States and between dollar countries and the rest of the world?

One other point I would like to put up to him, if he has time. Many people sometimes forget the overwhelming importance in Europe's present plight of the economic crisis in the Far East and in particular in south-east Asia. We sometimes forget that while Europe has been disastrously hit by the war, it is the countries occupied by Japan and neighbouring countries like India, whose economic problems in the sphere of food consumption and agriculture, are as acute, if not more acure, than in western Europe. The recovery of western Europe, paradoxical as it may seem, is intimately bound up with the recovery of production in that vast area. I remember some figures published by the U.S. Department of Agriculture pointing out that before the war south-east Asia was a net exporter of foodstuffs, largely oilseeds and rice, to the extent of about 4½ million tons; and that since the war that area has been a net importer to the extent of about 6½ million tons, mainly cereals. This represents a worsening of 11 million tons in the supply of vitally needed foodstuffs. Until that area recovers, and we in Britain are striving every muscle to meet the urgent exchange requirements of India, since India does not get Marshall Aid direct, the solution of these problems that have been referred to, particularly our need for more oilseeds, sugar, rice, and other tropical products will be to that extent delayed.

One last word in conclusion. I feel there is a distinct danger that with this generous aid that western Europe is receiving during this comparatively short period, we are accustoming ourselves to and allowing public opinion to expect a pattern of diet and a pattern of livestock production which we may not be able to afford when E.C.A. comes to an end. There is a danger that we may expand livestock production on the basis of imported feeding-stuffs to an extent which will be uneconomic when E.C.A. comes to an end. Those are some of the considerations which occurred to me in listening to Dr. Thibodeaux' invaluable analysis.

B. H. THIBODEAUX

I do not believe that Professor Lloyd has left any questions with me, except perhaps one, namely, the probable development of long-term production in North America. That is a rather current and weighty question. Perhaps some of the people in the audience who have recently come from the United States, and have been living with that problem there, would be in a better position to answer that particular question than I am. Can we call for a volunteer?

L. H. Bean

Mr. Thibodeaux 'passed the buck' on with regard to Mr. Lloyd's question on American production trends in the near future to one of us who has more recently come over from the United States. One observation needs to be made in addition to what he has already said about our production problem. Our production, as he pointed out, will be determined in part by the course of production in Europe, and in other countries; it will be determined in part by weather and in part by technological developments. I should like to inject an additional factor, and that is the factor of politics. The Brannen Plan is featured for its proposal that prices for perishable products be allowed to follow the course determined by market conditions of supply and demand, instead of by fixed prices. The difference between market prices and 'parity' prices is to be given to producers in the form of a government payment, a 'production payment'. There is a good deal of interest in that proposal among the city population, because they see in it an opportunity to secure milk, meat, fruits, and vegetables at lower prices, as Dr. Stine indicated in his paper the other day. Now in that fact I believe lies part of the answer to what the course of production of export crops is likely to be, as it relates to the production of Europe, and the European demand for American farm products. Underlying the Brannen Plan is the thought that the adjustments in agricultural production which are bound to come in the near future may be brought about much more rationally and with less detriment to the American farmer if they are guided by means of production payments. The adjustments which seem to be envisaged are these: As we find ourselves required to move out of export products such as cotton and wheat in which, Dr. Stine pointed out, we were beginning to accumulate surpluses, it would be desirable to expand the acreages in grass and the production of livestock and livestock products. To consume that additional production it will be helpful to have the lower retail prices the Brannen Plan would make possible.

I should like to point out one additional fact with regard to the production of all products in the United States which has some bearing on the problem being discussed here this morning. President Truman recently announced that it is his aim to promote the expansion of the national production of the United States to a value of about $300 billion in the near future, that is, in the next few years. The $300 billion compares with a national income in 1948 of about $225 billion. To the statisticians who have studied the long time

growth of production in the United States in the aggregate, that $300 billion figure is directly in line with part-trends, and therefore, is not an unreasonable figure. However, for most of the people in the United States who are not trend-minded, $300 billion seem a high objective. If we can avoid a business recession in the next four or five years, I am pretty sure that that $300 billion figure can be attained. If attained, it would mean a large market for the products of Europe in the United States both for certain raw materials required for the $300-billion production, and for some of the luxury products that we would like to import.

W. H. Dankers

I am very glad to make just a brief comment on the point that has been raised by Mr. Lloyd and also by Dr. Thibodeaux. I have had the opportunity during the last three months to be with the Military Government in Bavaria, and it was stated, if I have followed the figures of Dr. Thibodeaux correctly, that the increase in livestock output would be about the same as the increase in the numbers of livestock. We have had an opportunity to confer with many of the German research workers, and I believe that they agree with us that at least in the area of Bavaria—it is my understanding that it would also hold in a large part of western Europe—the output of livestock can be increased beyond an increase in numbers. Just a few illustrations. Egg production in Bavaria, probably somewhat under-reported, is only about 100 eggs per hen, and research people in poultry concur that that can be increased very materially. Therefore I would like to say in answer to Mr. Lloyd, that perhaps the emphasis could be on efficiency in production, rather than on the increase in numbers of livestock on these farms, and the result would probably be the same.

Milk production is another illustration. This might not hold in all of the different areas of Europe, but in Bavaria milk production per cow is considerably below what the research people believe can be accomplished within a very short period of time. I think sometimes it is necessary to realize that some of these areas have slipped back during the War and post-war period before they actually began to recover. For example, in Bavaria in a recent survey, I think 19 per cent. of the dairy cattle were found to be infected with tuberculosis, and therefore the culling of some of the high-producing animals has been necessary.

I would like, too, to say briefly how much I concur very definitely on one other point that Dr. Thibodeaux stressed, namely, on the

need for giving farmers more technical advice and assistance. It would be ridiculous to say that in western Europe this has not been done in the past. However (again I am drawing my illustration from Bavaria and it is my understanding that what has been the case in Bavaria is typical of larger parts of western Europe and especially throughout Germany), the advisory system has been very closely tied to the agricultural schools. The work has been done pretty largely among students or former students of the agricultural schools, which is a very small percentage of the farmers. In seven *kreise* there have now been established what we call enlarged advisory services and it has been most gratifying to observe the tremendous interest on the part of the people to get more information; the masses, not only people who have previously gone to school. I attended one meeting where poultry diseases were discussed, and at the same meeting the preserving of home-grown fruits was introduced. It was no different from attending one of our meetings in the United States where people were most eager to get that kind of information. The only reason I speak of this is that the whole intention of that programme is to accomplish these aims that Dr. Thibodeaux talked about this morning.

I believe there is great need throughout western Europe to expand that type of agricultural education. In conclusion, I would like to ask a question. Does Dr. Thibodeaux believe that the aids he has discussed can be accomplished without a revival of trade between the agricultural areas of eastern Europe and the western section?

B. H. Thibodeaux

In regard to one element in Mr. Danker's last point, a resumption of trade between eastern and western Europe is a normal and desirable development that the E.C.A. has encouraged as one of the important factors in the economic recovery of Europe generally.

Others in the audience who are recently from the United States may wish to comment further on Mr. Lloyd's question regarding American agricultural production plans, but it may be useful to interpose a few comments here.

American agricultural production was geared to high production objectives and attainments to meet the huge war and post-war needs of Europe and other parts of the world. Reduced efforts from the Far East were offset, at least in part, by greatly expanded exports from the Western Hemisphere. A large pre-war importer of fats, the United States expanded her production sufficiently to meet her own needs and to export huge quantities. Pre-war wheat exports from the United States amounted to an annual average of about 2 million tons

compared with approximately 15 million tons this past year. The overall volume of agricultural production was increased tremendously in response to price and income incentives and as a result of rapid technological improvements and a series of years of exceptionally favourable weather conditions.

What adjustments are now to be made in American agricultural production? The obvious question to that one is, adjustments to what? We have discussed the European agricultural production programme here, the factors that will condition its accomplishments, and the uncertainties that Europe faces in financing needed food imports following the termination of the E.C.A. programme. The outcome of these conditions in Europe will influence the kind of an agricultural production programme that we may have. The production prospects in other parts of the world are also a factor that condition the adjustments that may be desirable in American agricultural production, aside from those that may be forced by adverse weather conditions, following our series of good years. In short, the United States cannot well plan its production programme, so far as the export side is considered, except in relation to the external forces that condition the effective export demand for its products. In view of the present uncertainties as to those external forces, there can be only a limited basis at present to establish a long-term pattern for American agricultural production and exports.

JOHN LEWIS, *Shadingfield, Emsworth, Hants*

I say something about agriculture with the greatest degree of temerity at these meetings, because, being just a sample of the raw material, you must realize what an ordeal it is for me to face a body of trained experts who know ever so much more about my farm and my farming than I can possibly hope to know myself. There were one or two quite side issues that occurred to me on the paper by Dr. Thibodeaux, and I would like to mention them because there might be an idea abroad of what British farming is doing, and that it is not perhaps doing all that it might.

I am quite well aware that Great Britain with a population of 50 million to feed, can never, in view of its resources, be of any great interest to the world situation through the possibility of having an exportable surplus. At no time we can see ahead shall we be in any other position than of requiring to get a very large percentage of our food from abroad. Now, the farmer may look at the world situation and listen to a lot that he is told, pep talks and so on, but he will always have regard mainly to what he can do with his own farm.

During the War we made tremendous efforts. Farms, such as the one that I myself had prior to the war, were simply cattle ranges. We had 1,100 acres, and not one acre was ploughed. It was all grass and very lightly grazed. To-day we have 500 acres under the plough, and at the same time our milk production has gone back only very very slightly.

I mention these data because I can only speak of my own farm, but all around similar processes have been going on. With the end of the War we are asked for still greater production. You must remember we were more or less fully extended, and, whatever we may wish to do, I do not see how we can so greatly increase the volume of agricultural products. That is quite obvious. You can follow the plough but you can only do it once, and we are now coming up against the situation where we have no more reserves of cultivable land. We can get an increase of production in certain respects. We can add to our poultry, and we can add to our pig population, but for that we must have more imports of coarse grain from abroad. It is one of the complaints which we make to our Government that they do not set aside enough currency to get us more. We like to eat pork and bacon, though you might not think it, and the reason we do not is because we are eating the food that the pigs would eat. We have had to increase our diet very largely by having potatoes and vegetables instead of those more delectable commodities that the rest of the world are able to eat. We are not complaining. We just put up with it, and, of course, we do not really mind.

My reason for intervening is that our Minister of Agriculture recently administered a very sharp rebuke to farmers, because the acreage under wheat in Great Britain had fallen to just under 2 million acres and he wants us to make it 2½ million acres, and I thought that might perhaps convey rather a bad impression of what we are doing. But there is this to be considered, the traditional English way of farming is the mixed farm. Experts have told us it would be much better if the smaller farms were to concentrate on pigs, poultry, and market vegetables, and the raising of stock, and leave the grain-growing exclusively to the larger farms. But looking at it from a farming point of view, we have to remember that the repeated sowing of particular crops on one kind of soil does bring about diseases unless there is a proper rotation, the fertility of the soil will be lost and the yields will diminish. That, I am happy to say, is not the present position in England, because our corn yields this year are likely to be all round the highest ever per acre. It has been quite

a revelation to us as farmers of what we can do. I was brought up in the tradition that without animal husbandry you could not grow corn, and, when we got rid of our sheep and switched to producing corn with artificials, we were told that the end would soon be in sight. We heard the dreadful things about dust bowls and so on, and we thought that that was going to happen to us. Well, I cannot tell you why, but it has not happened so, and our yields continue to increase in spite of all the gloomy expectations.

There is another point which is illustrated best by one of our old proverbs, 'Do not carry all your eggs in one basket.' The British farmer will never wholly get rid of that idea.

So taking it all over you must think of us as trying with our limited mental capacities to do the best we can with the resources we have at our disposal.

H. C. H. GRAVES, *Vitamins Research Laboratory, London, England*

Dr. Thibodeaux has stressed the need, as part of the E.C.A. programme which must be fulfilled by 1952, for a substantial increase (under certain conditions) of agricultural produce in Europe, and he gave some details in aggregate form of the progress made to date.

He also stressed the need for an increase in 'dollar earning', as opposed to 'dollar saving', by recipients of E.C.A. aid.

Notwithstanding the demands made on our productive capacity by the effort to make good the capital ravages of war, Great Britain—sometimes thought to be 'sitting down on the job'—has made bigger strides towards both these objectives than has any other western European country—certainly any country of comparable size. Britain's ratio of exports to imports in 1948 compared with the like ratio in 1938, is 1·90 (i.e. 90 per cent. improvement).

The increase in agricultural production in Great Britain since pre-war days is also, in total, far higher than that of any other country, and has been achieved not only by increased acreage, but also by improved techniques, and as a result of the application of research results through the Agricultural Advisory Service and in other ways, in a manner unsurpassed anywhere in the world.

But now we come up against two difficulties:

(*a*) Dr. Thibodeaux himself referred to 'dollar saving' as less desirable than 'dollar earning', and our agricultural expansion is clearly in the former class.

(*b*) Our Australian, Canadian, and New Zealand friends—among others as we have already heard here—view the resultant 'distortation' of traditional world economy in this respect with understandable

apprehension. How can we break what is little short of a vicious circle? British exports to U.S.A. require the expenditure by each U.S. citizen of rather less (speaking from memory) than 1 per cent. of his income.

If this could be increased to 2 per cent. the resultant dollar earnings would largely—if not entirely—solve this problem, and enable us considerably to modify the 'austerity' of our dollar saving activities—with benefits not only to U.S.A. agricultural producers, but to agricultural producers in Europe as well. But when we look at the obstacles in our way, we are faced at once with the U.S. tariffs—I cannot believe that the American Automobile 'Goliath', for instance, needs protection against the British 'David', and I would, therefore, like to ask one simple question: Does Dr. Thibodeaux think that there is any possibility that the U.S.A.—which has already put the world in its debt by those two most unsordid acts between nations in human history (to quote Mr. Churchill) viz. lend-lease and Marshall aid, will 'round off' its contributions to world recovery by what is possibly the only method in which the Gordian knot can be cut—the unilateral removal, by the U.S.A., of as much of its tariff barriers as will bring about an import equilibrium at the 2 per cent. level (to which I have referred) instead of the present 1 per cent. level, for Britain, and *pro rata* for the rest of Europe?

K. SKOVGAARD

Dr. Thibodeaux emphasized in his paper quite rightly the necessity of an increased efficiency in agricultural production as an essential means of the recovery of the European economy. In my country, as in most west European countries, however, high efficiency in livestock production has for many years been conditioned by imports of feeds like grains and oilcakes containing proteins. After the war the overseas feed-imports mostly demand hard currencies, and as Dr. Thibodeaux advised us that east European grain-exports are very uncertain in the future, the result may be that the efficiency in the livestock production will become very adversely affected. The problem now arises if the overseas feed-imports will remain hard-currency imports. Before the war South America, and especially Argentina, contributed a substantial part of the European feed-imports, and the question is whether U.S.A. and other hard-currency countries are able to relieve South America of her agricultural exports or will she have to rely on the west-European markets to an increasing extent, when the high after-war demand is damping down?

B. H. THIBODEAUX

Professor Skovgaard's comments pose a question, among other things, as to what is meant by 'dollar zone' and 'hard currency'.

In brief, a hard currency, internationally, is simply one that is scarce, or about sufficient, in relation to the demand for it. In reference to the dollar sphere, I have loosely referred to the Western Hemisphere as the dollar zone. Actually, Latin-American countries may fall in or out of the dollar area, depending upon their individual balance-of-payment situations at different times.

Mr. Foulon, who is here from Argentina, is better qualified than I to comment on the trade relations of that country. The Argentine economy has a very important agricultural sector, and its agricultural exports are large. The Argentine imports coal, machinery, and many of the industrial items needed. Many of these industrial items come from Europe, and the Argentine exports large quantities of food and feed to Europe.

We are told, however, that Canadians prefer United States equipment because it is of good quality and is low-priced in relation to comparable equipment from other sources. I am not informed on this, but perhaps similar views are held in the Argentine. This poses the obvious challenge that European export products must be produced efficiently so as to be able to compete internationally in price as well as in quality. That is a major means by which needed food imports can be obtained in Europe.

# SOME ASPECTS OF CANADA'S INTERNATIONAL TRADE IN FARM PRODUCTS

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THIS paper was written at a time when another crisis in our international trading position was being made known to the public. Sir Stafford Cripps had announced that the dollar reserves of the sterling pool had dropped to $1·6 billion and that non-contract imports from the dollar area were being suspended until mid-September. Soon after Mr. Abbot's departure for London to discuss this pressing sterling-dollar problem with the British Chancellor of the Exchequer and the United States Secretary of the Treasury our Minister of Trade and Commerce, Mr. Howe, pointing out that Canadian reserves of U.S. dollars had declined below the billion-dollar mark, indicated that Canadian imports from the United States would again be curtailed. Up to this point, Canadian policy had been to relax gradually the import restrictions imposed back in November of 1947 upon imports from the United States.

These two incidents did not occur in isolation; they are part and parcel of the position between the United Kingdom and the United States in which Canada finds herself. In spite of a consistent favourable balance in overall trade we have a dollar problem which, while not nearly as acute as that of other Commonwealth and European countries, threatens to become shortly a good deal more troublesome.

In the pre-war years Canada almost invariably had a substantial net balance on current account with the United Kingdom and a net deficit with the United States. So long as our net sterling earnings from merchandise trade with the United Kingdom were convertible into United States dollars there was no need for Canada to seek a bilateral trade balance with each of these two countries. A sustained British demand for Canadian wheat and flour, apples, bacon, cheese, furs, lumber, pulp, paper, and non-ferrous metals enabled us to pay for British imports, to service and gradually retire our debt to British investors.

The Trade Agreements of 1935 and 1938 between Canada and the United States did much to restore the flow of trade which had been reduced by successive additions to the American tariff structure.

Upwards of 70 per cent. of our total imports are from the United States. Canada depends upon the United States for many materials basic to an industrial economy—coal, oil, steel, machine tools, cotton, tractors, and automobile parts. In addition we like a great many of the consumer goods which the Americans produce. The lower prices at which many consumer goods such as washing machines, refrigerators, bicycles, cotton textiles, films, and so on sell in the United States is a continual source of irritation to many Canadians. This price differential is, of course, entirely of our own doing—a subsidy to Canadian industry in the form of a tariff on these commodities and, more recently, in the form of import restrictions.

Part of our imports from the United States we pay for with exports of pulp and paper, services to tourists—although our net earnings on the tourist trade are greatly reduced by heavier *per capita* expenditures by Canadians for travel in the United States—non-ferrous metals, lumber, and newly mined gold which the Americans are soft-hearted enough to buy at $35 an ounce. Apart from small movements of capital we have traditionally made up the net deficit in our merchandise trade with the United States by sales of convertible sterling derived from our surplus on current account with the United Kingdom. We, obviously, have a substantial stake in multilateral trading and the free convertibility of the currencies of those countries with whom we trade.

As Canada mobilized for war our imports of industrial materials from the United States expanded sharply, though imports of consumer goods were restricted by the War Exchange Conservation Act of 1940. Nevertheless, our deficits on current account with the United States were very moderate right up to 1946; we even achieved a small surplus in 1944 and 1945 for the first time during the period for which official statistics are available. The so-called Hyde Park Agreement of 1941 which permitted us to receive U.S. dollars for our sales of war equipment, our restrictions on consumer expenditures in the United States and large sales of accumulated feed grains in 1943 and 1944 made possible this unique balance of sales with purchases.

The cessation of munition and grain sales to the United States in 1946 and 1947, together with a tremendous domestic investment programme, a relaxation of the controls on consumer purchases, and rapidly rising prices in the United States following price decontrol, caused our U.S. dollar deficit to skyrocket. It exceeded a billion dollars in 1947 and our U.S. dollar and gold reserves were reduced from 1·5 billion to 0·5 billion. In November of 1947 Canadians were treated to simultaneous announcements of the slash in tariffs by the General

Agreement on Tariffs and Trade and of new austerity restrictions on travel in, and imports from, the United States. At the same time the decision was taken to continue to maintain an official parity between the dollars of the two countries. Whatever the disadvantages of this method of achieving a bilateral balance of payments, and they may not be ignored, these two devices, together with renewed and heavy exports of beef cattle to the United States, did serve, by the end of 1948, to boost our gold and U.S. dollar reserves back to the billion-dollar level.

Those who support the maintenance of the Canadian dollar at par with that of the United States argue that the supplies of those goods which Canada exports to this market could not be expanded in response to a higher price, and that, unless the Canadian dollar fell to \$·70 or \$·75 U.S., our purchases there would not decline appreciably.

Many of those who favoured devaluation believed that a cheapening of the Canadian dollar would encourage additional capital imports from the United States. They argue that we should not attempt to finance the phenomenal investment boom which depends largely on the import of American capital goods, and of current earnings but should, rather, encourage the inflow of American capital. Their contention that devaluation would encourage capital imports is strengthened by the heavy sales of Canadian bonds and other securities to American investors prior to the restoration of the Canadian dollar to parity in July of 1946. Actually our capital exports in the form of redemption of Canadian securities held in the United States was, in this latter year, almost large enough to offset new American investment in Canada. After 1946 net inflows of capital from the United States were sharply reduced.[1]

The supporters of both sides of this issue would agree that restrictions on Canadian purchases and travel in the United States are highly undesirable. Our economy has become very closely integrated with that of the United States. Our southern neighbour can supply us with many producer- and consumer-goods at a lower price than we can buy them elsewhere. If restrictions are placed on the entry of these goods we must turn either to higher priced domestic or foreign-made substitutes, or do without.

Import restrictions in the absence of price controls also provide existing domestic producers of the restricted commodity, or close substitutes therefore, with windfall gains at the consumer's expense.

[1] See the *Canadian Balance of International Payments 1926–48*, Dominion Bureau of Statistics, Ottawa, 1949, p. 70.

We shall need both to expand our exports to the United States and, contemplating devaluation or the relaxation of exchange controls, again to appraise the reciprocal elasticities of supply and demand for products traded between the two countries.

During the war our net balance on current account with the United Kingdom jumped to over a billion dollars a year as compared with about 135 million in the late thirties. This favourable balance on our current account with the United Kingdom was bridged by a variety of measures: outright gifts, mutual aid, export credits, loans, official and private repatriations of securities, and finally sales of gold and U.S. dollars to Canada.[1] In the post-war period the current deficit of the Sterling Area has continued at about three-quarters of a billion dollars a year. Our post-war loan to the U.K. of $1¼ billion compared favourably in the light of our population and resources with the $3¾ billion loan by the United States. In an effort to protect our U.S. dollar reserves in 1947 we restricted drawings on this loan and Britain largely financed its deficit with Canada in 1948 by the sale of U.S. dollars. This loan is now being drawn upon at the rate of about $10 million per month.

Although the import restriction programme cut our trade deficit with the United States in 1948 the one factor which averted, or perhaps only staved off, a crisis was the European Recovery Programme. In effect E.C.A. substituted sales of Canadian goods on credit to European countries in favour of sales to those countries for U.S. dollars. At the end of June 1949 E.C.A. authorizations for expenditure in Canada had mounted to $763 million. The principal products for which expenditures have been authorized include: bread grains, non-ferrous metals, wood products, animal products, machinery, fish, and chemical products. Although not a direct beneficiary of E.C.A. Canada has certainly been an indirect one and on a substantial scale.

Although the Canadian economy as a whole, caught as it is between the British pound and the American dollar, is in a vulnerable position the Canadian agricultural industry is even more vulnerable. Our annual exports of farm products have come to exceed a billion dollars in value and constitute more than a quarter of our total agricultural production. This average, however, tends to hide the extreme dependence of certain areas upon an export market for their product. The outstanding examples are wheat from the Prairie Provinces and apples from the Annapolis Valley in Nova Scotia. Roughly two-thirds of our wheat is exported and, until recently,

[1] See ibid. p. 38.

one-half of our apples. The impairment of our market for apples in the United Kingdom has necessitated federal assistance to apple-growers in the Annapolis Valley each year since 1939.

The traditional market for many of our staple agricultural products is in Europe, and especially Britain. Yet Britain is attempting to expand her own output of foodstuffs and to seek non-dollar sources of food imports. Our own balance of international payments dictates that we sell more to the United States and yet many of our farm products are competitive with, rather than complementary to, the agricultural products of that country.

Canadian policy with respect to international trade in farm products during the years following the War has been a continuation of that pursued during the War. We have persisted in pinning a great deal of faith to our export contracts with the United Kingdom. Although the beef contract was never too popular with the cattlemen and, despite some dissatisfaction over the contract price for wheat, these agreements have generally received the wholehearted support of Canadian farmers.[1] The continuation of these contracts is contingent upon the willingness and ability of the United Kingdom to sell United States dollars to Canada since it is hardly conceivable that she can expand sufficiently her earnings of Canadian dollars to effect a bilateral balance in merchandise trade. Britain's shortage of American dollars may well mean the end or substantial reduction of some of these contracts even prior to the end of the Marshall Plan. In the light of this situation it behooves us Canadians to survey much more carefully the United States market for Canadian farm products.

Although the timely advent of E.C.A. purchases pulled Canada's irons out of the fire in 1948 we may find that this very generous programme will not support the umbrella over us until its termination. The remarkable productive capacity of the United States is now enabling that country to supply much of the food which is being purchased with dollars by those countries receiving E.C.A. funds. The United States Government has accordingly prohibited the use of E.C.A. moneys for the purchase of pork, dairy, and poultry products, coarse grains, pulses, flax-seed, and tobacco. Although wheat has not formally been declared a 'surplus commodity' some sort of informal agreement is in effect whereby E.C.A. recipients do not request allocations for its purchase. I am not critical of this provision. The American contribution to the recovery of western Europe under the E.C.A. programme is an exceedingly generous one. The United States may not be censured for insisting that their

[1] Contracts are now in effect for wheat, bacon, cheese, and eggs.

surplus commodities should have first chance at the market which a gift of their own dollars has created.

The recent 25 per cent. cut in dollar purchases which the sterling area has put into effect on some seven commodities[1] will not affect our contract sales of food, although it will likely curtail shipments of Canadian tobacco, along with timber, non-ferrous metals, paper, and wood-pulp. The essentiality of most of these imports to the economy of the United Kingdom, together with a lack of adequate alternative sources of supply, favours our retention of the British markets.

By 1952–3 Britain may be able to find other sources of supply for most of the staple foodstuffs, except wheat and flour, which Canada is now supplying. The United Kingdom has negotiated long-term contracts with Australia, New Zealand, Argentina, Denmark, the Netherlands, Eire, Poland, and the U.S.S.R., for butter, cheese, meat, eggs, and bread, and coarse grains. If these contracts are fulfilled they may cover the entire import requirements of the United Kingdom for butter, meat, and coarse grains and satisfy, perhaps, one-half of her import requirements for cheese and eggs.

Assuming that the United Kingdom has a favourable balance of trade with the other sterling countries of Western Europe she may well have first call on Denmark's and the Netherlands' rather substantial exportable surplus of cheese and eggs. These estimates would tend to confirm the impression that, so long as the dollar problem persists, Canada should not count too heavily on selling livestock and poultry products in the United Kingdom. Nevertheless, if we can continue to sell our wheat and flour to Britain, our agricultural industry may find alternative markets for a modest volume of livestock products in the United States.

The demand and price for grain exerts a marked influence upon the supply of Canadian livestock products. Although the level of output of hogs in eastern Canada is fairly stable this is not true of western Canada. The volume of our bacon exports varies, rather directly therefore, with the level of hog production in the Prairie Provinces. Although a favourable hog-feed ratio is a necessary condition for a high output of pork it is not a sufficient condition. Hog prices are now very high—in fact live hogs are worth \$2 to \$3 per cwt. more in Toronto than in Chicago—and the hog-feed ratio is favourable,[2] yet, during the first seven months of the year

[1] These include tobacco, timber, raw cotton, non-ferrous metals, sugar, paper, and wood-pulp.

[2] The hog-barley ratio at Winnipeg for June, 1949 was 21·7 as compared with a long-term average of 17·4.

we had been able to ship only 25 million lb. of bacon to the United Kingdom. The current contract calls for 160 million lb.; in 1944 we shipped more than 700 million lb.

The second important variable determining the output of hogs is the level of farm income which, in turn, is closely dependent upon the price of grain. When farm incomes are fairly buoyant Prairie farmers are likely to consider that the increment to their receipts to be had from feeding hogs is not worth the effort involved. Grain is then marketed through the elevator rather than the hog.

The high contract price for our small exportable surplus serves to keep the price to the Canadian consumer at a high level and yet does not bring out the hogs. Meat-packing firms also find their average costs of processing pork products relatively high as a result of excess plant capacity.

As grain prices decline hog production may well increase. Since the Dominion Government now directly controls the marketing of our standard feed grains, oats and barley, as well as wheat, much will depend upon the level at which floor prices to the farmer are fixed as well as upon the selling price to the feeder. Less than 15 per cent. of our feed grains are exported; seven of the ten provinces are deficit feed areas and the Government has, since 1941, been paying the freight on feed grains from the Prairie Provinces to these deficit feed areas. It is, therefore, in the interests of both the western grain-grower and the eastern feeder that we find a market for our surplus meat, poultry, and dairy products which are produced from this feed grain.

There is little or no prospect of selling grain to the United States despite her large imports of feed grains from this country from 1942 to 1944. With wheat crops in excess of a billion bushels and corn crops nearing the 3·5-billion-bushel level the United States will be a competitor for existing markets rather than a customer.

The Canadian farm products best able to compete in the American market will continue to be beef and beef-cattle. We shipped the equivalent of some 600,000 head of cattle and beef to this market in 1948 as compared with pre-war exports of about 200,000 head. We cannot compete with Argentina in the United Kingdom market even if sterling were freely convertible. The United States tariff on beef favours this trade and, unlike some other processed commodities, beef enters at a rate of duty comparable to that on live cattle.[1]

[1] The tariff is 1½ cents per lb. on live cattle and 3 cents on beef. There is an annual import quota of 400,000 head of beef cattle weighing more than 700 lb. The equivalent tariff on beef and cattle may be contrasted with that on canned and fresh salmon. The

Although excluded from the American market during the War to meet the twin objectives of channelling meat to Europe and of controlling the domestic price of beef, the British contract was suspended in 1948 and our cattle readmitted to the United States.

Although Britain has been the traditional market for our bacon, this product appears to be good enough to sell in the United States in competition with American bacon. The tariff is moderate on both live hogs and bacon.[1] One very real shortcoming of this market is that we may run foul of the United States price-support programme, as happened with potatoes last year. We are now ourselves excluding pork products from the United States and maintaining a high price to domestic consumers in an unsuccessful effort to fill a small contract (160 million lb.) with the United Kingdom. If we are to get our bacon into the United States market we will likely have to refrain from negotiating further contracts with the United Kingdom, lift our export embargo on shipments to the United States and permit the prices of hogs and pork products to find their own level. The equilibrium price is almost certain to be lower than the present contract price for Wiltshire sides.

One important question to which we have yet to find an answer is as to whether, if we are to sell to the United Kingdom, we must sell on an all-or-none basis. If the bacon contract is discontinued will the British Ministry of Food be prepared to buy on the market in Canada as supplies are available, or if we are to sell any bacon elsewhere must we sell it all elsewhere? The apparent preference of the Government of the United Kingdom for state trading and long-term contracts suggests that they will buy only within the framework of a formal contract.

We might also find a market for some dairy products in the United States. Boston and New York City draw fluid milk and cream from the mid-western states. The Eastern Townships of Quebec might supply a part of this demand—at least to fill the quotas which are available at moderate rates of duty—although the duty on fluid milk in excess of the 3-million gallon quota is not prohibitive at present prices.[2] Canada can only export fluid milk with the co-opera-

tariff on the fresh salmon is ½ cent per lb. as compared with a 25 per cent. *ad valorem* tariff on canned salmon which, at present prices, is equivalent to about 8 cents per lb. This discrimination against the processed product has resulted in the Canadian Government protecting the domestic processor by placing an embargo on exports of the better species of fresh salmon during a major part of the fishing season.

[1] The rate is 1 cent per lb. on live hogs and 2 cents per lb. on bacon.

[2] The tariff on quota imports is 2 cents per gallon; on over-quota imports 6½ cents per gallon.

tion of local fluid milk authorities in the United States since sanitary inspection is required and this latter requirement could be used to exclude foreign milk. It would also need to be a fairly stable market if exports are to be available during the winter months. We might be able to market some of our better-quality Cheddar cheese in the United States, although a 17½ per cent. *ad valorem* tariff approaches the threshold of prohibition.

Although Canada has herself excluded, until very recently, the export of these dairy products to the United States, our farmers have been permitted to export pure bred dairy cattle free of duty. This export has been expanded and has, to some degree, permitted us to take advantage of the higher prices for milk products across the line.

Canada has a vital interest in a system of multilateral trading so that she may continue to pay for a wide variety of imports from all over the world by the export of a relatively few staple commodities. It is to be hoped that such a system of trading will permit those countries which can produce more cheaply to supply those commodities in which they have a comparative advantage. The present rigid control over rates of exchange and the inconvertibility of currencies tends to prevent costs from exerting their full effect upon supplies. The price mechanism has lost much of its effectiveness as a means of determining who shall produce what goods.

Canadian agriculturalists have recently been warned by Mr. F. R. Scott, the Vice-President of the National Farmers' Union of England and Wales that 'dumping of commodities at prices below the cost of production . . . will be resisted vigorously'.[1] At the same time we observe that the guaranteed prices to British farmers for grains and hogs are substantially in excess of Canadian prices.[2] While admitting that there may be non-economic motives behind this policy a Canadian might be pardoned for quoting Professor D. H. Robertson's comment—'the fact that a country *could* make or do such and such is too easily taken as proof that it *ought* to be making or doing it. Is England's agricultural programme perhaps extended not merely up to but beyond the limits of reason?'[3]

We will perhaps find that in the not too distant future fewer of our

[1] F. R. Scott, 'International Farm Problems', *Agricultural Institute Review*, July 1949, p. 313.

[2] Comparable prices to farmers in the United Kingdom and Canada as of July 1949 were as follows: wheat $2·51 per bushel plus $12·09 per acre for first 10 acres; $1·75 plus participation payment: oats $1·27 and $·79: barley $2·01 and $1·30: hogs $43·05 and $31 per cwt., deadweight.

[3] D. H. Robertson, 'Britain and European Recovery', *Lloyds Bank Review*, July 1949, p. 1.

farm products will be sold under the aegis of bilateral contracts with the United Kingdom. There is some room for hope that the United States will adopt techniques of price support which, while maintaining a floor price to the farmer, will permit the prices of farm products to reach an equilibrium level on the open market and thus facilitate the export and import of such products. It is also to be hoped that Canada will not be strait-jacketed by institutional arrangements into selling all of our exports of a given commodity to *either* the United Kingdom or the United States.

The trend of agricultural policy in Canada may best be described as 'mixed'. Although war-time price control has virtually been completed we are now extending governmental controls over the pricing and marketing of farm products. The impetus behind this trend is organized agriculture's desire to secure stability and to escape from cyclical fluctuations in price. Canadian agriculture is still a staunch supporter of 'the World Food Board' approach to expanded trade and more stable markets.

This attitude reflects a realization of the very close dependence of our agricultural industry, and indeed of the Canadian economy as a whole, upon a high level of exports. Time and competence preclude my examining the outlook for an expanded market in Canada for the manufactured goods of western Europe. I am, however, extremely doubtful that Canada will, even after 1952, be prepared to import from these countries as much as she would like to export to them. We are likely to continue to prefer American manufactured products. Our balance of payments as against the United States may well improve with the development of our iron ore and petroleum deposits. Should our neighbour find that, after 1952, export markets for American surplus farm products are not to be had, her farmers may well go after their own domestic market for such products as Canada might hope to supply.

G. L. BURTON (*continued in reply to a question*)

Dr. Norton asks me if it is necessary to have a great expansion of direct exports from Europe to North America in order that Europe may be able to buy the food and other products from North America that it needs.

I suspect Dr. Norton is seeking an alternative means of achieving a balance of payments as between Europe and North America. In other words, must Europe find a direct export market for a sufficiently large volume of her products in North America as to pay for her imports from this area, or may she not achieve a surplus in her

accounts with other countries and apply this surplus to her North American deficit? This second alternative pre-supposes a greater degree of currency convertibility than now exists and the necessary pre-requisite to such convertibility would seem to lie in a revaluation of a number of the 'soft' currencies as against the dollar. Given such convertibility, I should think that Europe might earn a limited amount of dollars by trade with a third group of countries but that her main approach must still lie in an expansion of direct exports to North America. Any return to pre-war triangular trade patterns is now more difficult by virtue of the fact that few non-dollar countries have any substantial surplus of dollars with which to pay for their excess of imports from Europe.

S. Sinclair, *University of Manitoba, Winnipeg, Man., Canada*

In the papers we heard this morning we obtained a fair picture of the position of food and agriculture, and the suggestion that the Western Hemisphere, particularly with the aid of E.C.A., will be able to produce the necessary food. The papers also emphasized very strongly the factor of trade. It is an age-old and elementary principle that to get the food from one place to another it must be paid for, and this can be done best through trade. I should also point out the suggestion implied by Professor Burton that as far as Canada is concerned, and I think the same can be said of other countries, purchases of industrial products will be made where they can be bought cheapest. At present that is mainly in the United States.

It would have been interesting to learn from Dr. Thibodeaux in what fields of industrial production he thinks European countries have a competitive advantage against the United States and Canada so as to enable them to make up the balance of payments necessary to enable Europe to import required agricultural products.

B. H. Thibodeaux

The answer, subject to wide variation in its details, is that the United States possesses tremendous advantages in the mass production of industrial goods. It is in those items that require a large amount of hand labour, whether industrial or other, that western Europe can find her best opportunities for a further development of exports to the United States. My answer is a generalization, but it may be of interest to note that the E.C.A., in co-operation with the U.S. Department of Commerce, is now making a survey in Europe to ascertain how European exports to the United States may be increased.

# FARM APPRAISAL

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THE problem of justified appraisal of agricultural soils is of great importance for agriculture and land ownership, for this appraisal is concerned with agriculture as a production process and as a source of value and, consequently, should take into account the natural local factors, the soil included, as well as the economic, social, cultural, and psychological influences of man and society.

The problem of justified appraisal is a difficult and complicated one, but, nevertheless, it is highly attractive. It is pre-eminently the field of agricultural synthesis: it ascertains and weighs the inter-relationship of science, knowledge, experience, and observation of the individual facts and phenomena. Also, full justice is done to techniques, economics, and sociology, which are included in harmonious connexion. In this field of research, analysis is always followed by synthesis.

So, fundamentally, the appraisal process ranks higher than many a branch of agricultural science, where only some detached phenomena are analysed and studied without regard to the entirety of the farm and its relation to the social and economic environs.

Whereas, from the scientific side, in central Europe and in the United States of North America much attention has been paid to the appraisal process, it is remarkable that there lies an area between the Wadden Islands (north of the Netherlands) and the Riviera, where little, if any, interest is shown in farm appraisal. Typical is the remark of a French agriculturist: 'La valeur de la terre ne se calcule pas, elle se constate.'

I shall start with a description of the various theories of appraisal.

(*a*) In the first place mention may be made of the *capital method*, by which the soil, buildings, and stock are valued separately, regardless of the fact that the net return results from the conjunction of all capital elements.

The science of farm management, which, as early as last century, rightly distinguished between the return value and the exchange value—which, for instance, was set forth in the work by von der Goltz at the beginning of this century—strongly underwent the

influence of the purchase-price theory. The great advocate of this theory was Aereboe.

(*b*) The adherents of the purchase-price theory declared the theory of the return value to be a utopism, as, in their opinion, it was impossible to deduce values direct from returns, it being absurd to assume values which may develop independently of the prices determined by supply and demand.

According to the purchase-price theory it is not right to consider the return a primary, and the capital value of the land a secondary, factor. For the cultivated soil does not yield returns without more, but only when, capital and labour are applied, the returns then being in proportion to this application. So the outlay is a primary factor and the return should be placed on a secondary plane.

At present, however, the view is held that the admissible costs (intensity) depend on the possibilities of return in yield or in returns. So the costs should be based on the returns and, in consequence, are secondary.

The purchase-price theory involves the exclusion of return calculations in the appraisal of property, as the price determined by supply and demand is the only criterion.

The following disadvantages attach to a one-sided application of the purchase-price theory:

1. The formation of purchase price is often affected by circumstances which are isolated from the object under consideration. In this connexion may be mentioned the need for capital investment.
2. The purchase price is influenced by irrational factors, especially when there is a small supply and a heavy demand.

The influence of these unweightable factors can only be ascertained by calculating the return value, which cannot be done by means of the purchase-price theory.

The purchase-price theory tended to lead the appraisal procedure astray, as in practice this theory strengthened the influence of the intangible factors and of the general economic condition with its speculations and investments. Therefore this method brought in its train uncertainty and dangers for agriculture.

(*c*) Finally, according to the theory of the *return value* the soil is used by agriculture, because it yields a certain return and any soil appraisal should primarily be linked up with the size of this return, with the farm economic value of the object, and with its net rental value. The whole complex of ownership rights aims at only one

thing: return or income. 'Income is the alpha and the omega of economics', says Prof. Fisher in *The Theory of Interest.* And after rejecting with Böhm-Bawerk the costs method of valuation he defines value as follows:

'The value of the good itself is the discounted value of the value (however determined) of its future services. It is true, the crop depends on the soil that yields it. But the value of the crop does not depend on the value of the soil. On the contrary, the value of the soil depends on the expected value of its crop. Therefore, our valuations are always expectancies at the same time.'

The concept return value is important, because in determining it an adequate remuneration for the labour of the farmer and his family as well as for his working-capital is taken into account.

The individual or subjective return value based on the farming results of the holding to be appraised, and obtained through capitalization of the average annual rental value, reflects as such the abilities or disabilities of the farmer and for that reason is not a generally usable yardstick for value. But the average or objective return value does provide such a standard. As the determination of the objective return value is based on a number of analogous farms and ordinary farm management, the subjective influence of the abilities of the farmer is eliminated.

The sale-value is generally in excess of the return value, especially in the case of smaller holdings. The causes of this are the following:

(*a*) the unbounded competition among the great number of intending buyers of land;

(*b*) the small farmers have less regard to the remuneration of their capital and labour than to the opportunities offered by the farm for utilizing as well as possible the labour of the members of the family, and of redundant and less able-bodied labour;

(*c*) the attraction of the soil as safe investment which appears from the bidding of too high prices as compared with the rentals. So this provides an extra investment value;

(*d*) the imponderabilia, or intangible factors such as favourable situation, love of the soil and the parental farm, attractive farm-house, home-uses, amenities, *valeur d'amateur*.

In addition to amenities the nearness to definite centres may also have a real economic basis, owing to greater purchasing-power of the same net return.

In the practical valuation of the purchase price, starting from the return value as resultant from the production process, it will be

necessary to ascertain in what measure special factors such as those mentioned above may be taken into account.

Too high valuations, however, lead to encumbrance with debts.

As early as in the time of free exchange a method of valuation was employed to calculate ordinary exchange values with the aid of capitalization. For this purpose the so-called natural capitalization rate was used, which was deducted from the real ratio of purchase price and rental.

This natural capitalization rate was subject to great fluctuations in time and space and was linked up with prosperity and purchasing power, the labour supply in the country, the situation and nature of the object. In favourable conditions a low capitalization rate is found, in unfavourable circumstances a high one.

Attaching to the natural rate of interest of free exchange, however, are all the subjective features which may present themselves in the formation of prices, viz.

1. Lack of money on the part of the seller.
2. The pecuniary resources of the purchaser.
3. The number of intending purchasers.
4. The need for housing on the part of the buyer, &c.

So the natural rate of interest reflects a variety of factors, which are in no way related to the return value or even conflict with it.

In view of the investment policy of the investors, as of the large lessors, who are sure to take into account the general rate of interest, especially in view of the impossibility of fixing the various rates of interest in the event of price control, it would not seem unreasonable to base the capitalization of the rental for calculating the return value on the general rate of interest or on the rate of mortgage interest.

A deviation from the general rate of interest would now be quite arbitrary. In this case proper allowance should be made for the special value elements we wish to recognize over and above the return value.

In Switzerland, a weighted mean of the rate of interest of the first and second mortgages on farms is taken as a capitalization rate, in the U.S.A., it is confined to the rate of interest of the first mortgage. The rate of capitalization is changed only when the change in the mortgage rate is relatively permanent. Because the investor may choose between investment in mortgage and in land there must be interplay between the two rates of interest. According to these views the rate of interest which is used in ascertaining the value should be the same as the rate payable by the farmer for the part of the purchase money he has to borrow.

As the acquisition of a house is a very attractive feature, the rate of capitalization need not exceed the mortgage interest. So the greater amount of risk run by the farmer with regard to investment in mortgage is compensated by the possession of a house.

In practice the return of land will sometimes be lower in consequence of an anticipated increase in value of land and in consequence of the influence of the intangible factors.

Logically, the return value theory leads us to consider the soil and soil productivity by the side of a judgement of the other factors which determine the net return and the rental value. In this connexion the place and the significance of soil science for appraisal should be determined.

A relationship between the types of soil and the rental and soil value considered over a large area cannot be expected to exist, because agriculture is not soil science, but a variegated production process in which an interplay of innumerable factors brings about the realization of the net return. The soil constitutes only one of these factors. To a certain extent agricultural technique, which has made great strides, liberates us from natural circumstances, especially in horticulture and in cattle farming.

Side by side with the soil may be mentioned as important natural factors the climate, the micro-climate, topography, and hydrology. Further, farm economics has shown that the net return and, in consequence, the rental and soil value are most strongly affected by the type of farming. With regard to the latter, reference should be made to the difference in net return per acre and the difference in soil value between horticulture on the one hand and pasture and arable farming on the other.

The fine restricted soils for horticulture have only a slight exchange and rental value when they are destined for carrying on extensive pasture farming, and no value at all when they are covered with native forests as was the case in olden times.

So we must not overrate the significance of the factor of soil for the holding and its value. We should put it at its true value, as befits a good appraiser. The overrating of the soil factor by practical experts may be due to its conspicuousness. Many other factors are less obvious and require a more difficult investigation of a combined nature.

1. Starting from the existing economic and social conjuncture the soil is a decisive factor when we want to change the purpose of the soil, that is when a new culture is introduced.

2. This is also the case in the determination of the productivity of the soil for individual valuation, in the estimation of the yields of the crops occurring in the cropping system.
3. Further, the knowledge of the soil is indispensable when comparisons are to be made between farms of which the value is known, e.g. type-farms, and the objects to be appraised. But in this case the internal and the external traffic positions also come into play. Essentially, the influence of soil differences on the dispersion of the soil value within a certain type of farm is concerned here.
4. Finally, in estimating the value of the separate parcels of an appraised farm not only the situation and the parcelling-out but also, and especially, the condition of the soil is of great importance.

I turn now to some of the more important appraisal systems in practice. After 1925, the *Einheitsbewertung* method of appraisal, or appraisal of the *Einheitswert* (value of units), was developed in Germany by the Government Financial Administration with a view to obtaining uniformity in the various standards employed in appraisal for fiscal purposes.

A long time ago Thaer introduced into Germany appraisal tables based on kinds of soil. But Stremme departed from the insufficient basis of the mechanical composition and passed on to the types of soil, which are also related to morphology. Stremme found a relationship between the type of soil and the size of the crop. But the wide variety of soil types, the absence of a uniform nomenclature, and the difficulty for practical appraisal of using these scientific designations forbade their use in appraisal tables.

Wolff, von Bülow, and Görz (*Jahrbuch Preuß. Geol. Landesanstalt*, 1933) suggested the classification of the types of soil according to their value in condition levels, *Zustandsstufen* (*Alterungsstufen* and *Entwicklungsstufen*). In the valuation of the objects two tables are used, one for grass land and one for arable land, both with ratios for the net returns.

In the arable-land table are indicated on the one hand the physical soil types grouped according to the principal geologic formations, and on the other hand seven condition levels (from Tsjernozon to sand and bog-ore profile).

The grass-land table is not based on vegetation, as in the case of older German tables, but directly on soil, water condition, and average annual temperature, and leaves geology out of account.

The soil figures of the tables refer to the differences in net returns in usual and proper farm management and on the assumption of an average climate, a level surface, and the economic conditions of central Saxony on medium-sized farms.

From a weighted average arable-land figure and a weighted average grass-land figure results a *Bodenklimazahl*, which is 100 for the most favourable farm in Saxony. By correcting deviating economic factors the *Betriebszahl* results, and by means of a table the *Einheitswert* or return value may be found. In this table the return values have been grouped in nineteen classes with a very great dispersion.

This detailed method of calculation is only applied for the standard farms. The value of the other holdings is deduced from these findings.

Apart from farm appraisal the soil scale was taken as the basis for the Government Soil Appraisal by Prof. Dr. Rothkegel, in which all soils were specified, the result being included in the land register.

For those who want to develop soil mapping in such a way that the results may be used for land classification and appraisal, it is important to know of this development in Germany so as to obviate errors and disappointments.

The weak points of this German method are the insufficient farm economic basis and the comparison with one top farm, which is often situated at a great distance from the farm to be appraised and which, therefore, will mostly show other natural and economic production conditions as well as a different system.

The Swiss method is not based on soil science, but on farm economics. It has been deduced from the average data of book-keeping over a thirty years' period, by determining the relation between the gross return and the return value for the various types of farming and sizes of farms. This coefficient of the return value is fairly constant for the allied holdings and varies from 1·47 to 5·66 for the various Swiss types of farms. In order to calculate the non-adjusted return value the estimated average normal gross return of a farm is multiplied by the coefficient just mentioned.

In this system the following points are taken into account:

(*a*) the average ability of the farm manager,
(*b*) a normal method of exploitation,
(*c*) average annual returns.

Through the application of correctives (adjustment of the return value) the definite return value is derived from the non-adjusted return value.

Allowance is made for:

1. Letting one or more rooms of the farm house (capitalization at from 6 to 8 per cent.).
2. Finer rounding off.
3. Exceptional conditions with regard to the configuration of the fields, the premises, and buildings, attended with lower cost of labour.
4. New buildings in excess of the average; an increase in proportion to the saving in the cost of maintenance.

Deductions are made in respect of:

1. Considerable repair expenses to be incurred in the near future.
2. Prospective charges.
3. Exceptional conditions with regard to the configuration of the grounds, premises, and buildings, attended with higher cost of labour.
4. Buildings providing insufficient accommodation; the costs of enlargement are deducted from the non-adjusted return value.
5. Inefficient parcelling-out.

The application of the system is facilitated by the use of lists of standards for the volume of the yields and the prices (averages over a longer period).

It would appear to me that the Swiss method of appraisal is the best thought-out and the best founded, but for the present its application will be impossible in many countries, because it sets high requirements for our farm economic knowledge over a stretch of years.

In the American method, there was at first a controversy between the advocates of the method of the return value and the adherents of the sale value.

Before the war the method of sale prices was defended by G. C. Haas and Karl Brandt.

The fundamental question of the methodology was first discussed in the Joint Committee on Rural Credits, which endeavoured to devise a system of appraisal which would be generally recognized and accepted. The upshot of these discussions was that the committee recommended the employment of two methods, one stressing the net return and the other based on value comparisons.

In continuation of the work of this committee the American Society of Farm Managers and Rural Appraisers accepted a series of cardinal principles placing emphasis on return capitalization.

P. L. Gaddis, who was at one time head of the Appraisal Section of the Farm Credit Administration, developed a system which was a compromise between the method of the return value and that of the sale value.

Gaddis is no upholder of the direct return capitalization, but recognizes its value as an approach to the value per acre and as a means of control. The good points of the two methods are utilized and the disadvantages are avoided as far as possible. In the Gaddis method of appraisal analysis, comparison and capitalization are applied in succession.

Though, naturally, in methodology there will always be differences in details, it is a matter of general agreement in the United States that a combination of the two extreme methods will provide a plausible solution. It is also considered essential to vary the method, as neither yields satisfactory results for all areas and for all farm types.

Where there is much leasehold land, where the values are high and the value factors not affecting the return are negligible, in these areas the return value predominates and purchase prices serve to determine the amenities and to check the reliability of the appraisal of the return value. Where the opposite is the case, the sale value is stressed and the return figures are used for checking the results. In both cases an accurate description of the soil and the buildings is considered necessary. This physical inventory should be followed by an economic appraisal.

For an accurate administration of data an appraisal map is used, which is filled up when the farm is visited. In addition a detailed form has to be completed.

In America the exclusively intuitive appraisal method with its 'horseback and windshield' appraisals is no longer in favour. However, insurance companies' credit administrations and members of the American Society of Farm Managers and Rural Appraisers apply a system which is better founded both from a soil-science and an economic point of view.

Finally, there is the method of comparative statistics. It is a rule in differentiated intensive agriculture that, given equal local factors, a great variability tends to occur in the type of farm. The old, distinct farming systems, largely connected with soil, climate, and situation, have then disappeared in consequence of the economic and social process of development. The yields have become more and more individual, with a great dispersion round the mean.

Now the type of farm is one of the most important factors affecting the net return. In these circumstances the determination of the farm

type can only take place on a comparative statistical basis by forming groups of similar farms of about equal sizes, for which a number of standards of judgement are calculated in respect of costs and returns.

After analysing the type of farm in this way and obtaining data covering a few years' period it is possible to determine the rental value and the return value. In these conditions not the soil type but the farm type is a primary standard of classification. Thereupon the differences in local factors is an important factor in the determination of the dispersion of the value within the group. This distinction of various types of farms yields an equal number of comparison farms or type farms, with which the appraiser may compare his separate appraisal objects.

In this method it is essential to work in small homogeneous areas of which the soil types are known and to have a fair number of book-keeping records at one's disposal.

This system, which is based on type farms, has been advocated by me in the Netherlands since 1941 and is now in course of development.

The developments in the field of soil science with regard to soil productivity are important for appraisal. The results of these developments, however, may generally serve only as guidance for the appraiser, who will have to make an accurate productivity appraisal as part of the physical inventory, which should comprise not only the soil but also the improvements, the farm buildings, and the farm house.

A difficult and decisive step is the transition from the physical inventory to an economic appraisal. In this connexion it is also difficult to determine the share of the net return of the productive contributions of soil and buildings or, as counterpart, the determination of the farmer's remuneration.

In conclusion:

1. It is essential to arrive gradually at a better foundation and co-ordination of appraisal. Agricultural economics and soil science will have to contribute towards this goal in concerted action with a view to providing the appraisers with data in a convenient form.
2. It is also desirable to give courses in appraisal and to grant a diploma (which is already done in the U.S.A.)
3. In order to obtain fixed points of support or measuring rods for appraisal the system of type farms will have to be introduced.

4. An appraisal form is indispensable for adequate analysis, synthesis, uniformity, documentation, comparisons, and farm classification.

W. G. Murray

I have enjoyed this paper very much, and I would like to ask a question on the German system. Dr. Boerendonk's statement reads that the weak points of this German method are the insufficiency of the economic basis, and the comparison with one top farm, often situated at a great distance from the farm to be appraised. I had the same feeling about the German method until I visited Germany about three weeks ago. A group of Germans took me to a farm, an area north of Frankfurt, where they put on a demonstration for me. I obtained from them the impression that the top farm is only used as a reference, and that they had other farms in addition in every locality which they appraised in detail and used as reference farms. I gathered that they at least had this particular weakness in mind and were trying to correct it. I may be wrong in that; if so, I hope one of our German members will correct me. The other question I would like to ask is: to what extent does Dr. Boerendonk expect the differences in management to average out for your type farms; that is, if the records from an individual farm show unusually high or low management returns because of the manager's high or low ability, would that influence unjustifiably your key farm?

M. J. Boerendonk

I know I have been very short in this exposition: it is only a summary, of course, of the German method, so I only mentioned the name comparison farms (*Vergleichsbetriebe* in German). I know from recent literature that there are many of these comparative farms in Germany. But, nevertheless, there is one, and there stays one, top farm; as you know, that one is in central Germany (Saxony), and all tables, with their ratios of net returns, are based on this farm. The whole procedure of appraisal of the individual comparison farms in the different districts of Germany is a process of deduction from just one top farm, with all the weak points in it, in my opinion at least. I mean that if you want to have comparison farms, you have to take them not individually but as a group of ten or twenty in a certain agricultural region, all with one type of farming, so that these farms are analogous and may be compared.

So if you have 20 or 30 of these types in Holland then you have 20 or 30 of these groups of comparison farms, and when you take

the average of each group you have one abstract standard farm for each type. And at the same time you have also averaged the abilities or disabilities of the farm manager.

That is my answer also to the second question.

S. Sinclair

During the discussions here Professor Skovgaard raised the question of the division of farm production into primary and secondary phases. He intimated that crop production is of a primary nature, while livestock can logically be considered secondary farm production. Bearing this in mind and considering the varied nature of the sources of farm returns, does Dr. Boerendonk consider that total net farm returns should be considered when arriving at the value of farm lands?

M. J. Boerendonk

This question must be answered even for the Swiss method, I suppose, in this way: that one has to define a system of farming, and not the cropping system. In doing so you must take normal livestock production, not an over-intensification of livestock production by means of purchased feed as in the case of some rural areas of Holland. In studying the group of comparison farms, over-intensification, i.e. high costs, must be eliminated, otherwise you would come to too high a value for the land itself. Professor Murray in his book on Farm Appraisal has also indicated, as I remember well, that it is fair, in the case of intensive dairy farms, to make allowance for the management of the farmer and the significance of the buildings, whereas the soil itself is a minor item in comparison. When the group of comparison farms is homogeneous in every respect except for intensification (costs) then you get the trouble to apply a correction for this latter.

M. Rolfes

I think all Germans would endorse the remarks made here on the German system. There is, of course, a certain weakness in a system based on one yard-stick situated in a particular area, and it is still more of an objection when this one reference farm in central Saxony has extreme climatic conditions which make its adaptation to the varying climates in Germany particularly difficult. In practice, as Professor Murray has suggested, we can no longer refer to this farm, because it is on the other side of the Iron Curtain, and, as we are

now carrying on the work of soil appraisal as a basis for taxation in various western lands of Germany, we just take a reference farm of the particular land as our absolute yard-stick, and no longer refer to this farm in Saxony.

J. GILCHRIST, *West of Scotland Agricultural College, Glasgow, Scotland*

I have two short questions. First, is the forecasting of future price movements purely fortuitous, and second—though it does not arise on the paper itself—could Dr. Boerendonk tell us in general terms what is the trend of land values in the Netherlands at present?

M. J. BOERENDONK

In the Swiss method of appraisal a moving average of farm product prices over a period of thirty years is taken for calculating the gross return. So it is only the past that is considered. I mean that a period going back so far into the past is unreal for the Netherlands, where the agricultural policy of the Government tends to support the product prices to make farming a profitable enterprise. Great fluctuations of prices of agricultural products are not to be expected in our conditions.

Professor Murray indicated in his book on Farm Appraisal that the giving of equal weight to each of the previous years is likely to result in prices which are not at all reasonable to use in appraisal. And he discussed another type of moving average, a weighted one, supported by the fact that in forecasting prices the present price is more important than the price ten years ago or even one year ago. For instance, the most recent year is given a weight of ten, the preceding year a weight of nine, and so on, with the last and most distant year of a period of ten years having a weight of one.

As for the second question relative to the trend of land values in the Netherlands at present, I can answer that there is no trend at all, since there was a fixation of prices in 1940 and this fixation is still in force. As for the rent, there is no fixation but a control exercised individually by a provincial organ, the *Grondkamer*. For this control many intuitive appraisals are made and norms are used.

G. MEDICI

It should be borne in mind that in the matter of methods of estimation we have not yet reached a sufficient clarity, because unfortunately everyone is trying to find a method which is the right method, as though there were a unique approach, or a unique

method which would resolve all the innumerable questions which confront a person who has to express a judgement on estimation. I listened with great interest to the paper of our colleague, Dr. Boerendonk, because, in view of the fact that he represents the Dutch Ministry of Agriculture, and in particular that department of it which deals with estimation, he has been faced with a series of *particular* problems of estimation, while in practical life we have to resolve innumerable problems of estimation in which the estimates required have to be satisfactory for a range of different purposes. There was a time when we were confronted with more uniformity, where differences between different parts were extremely slight, whether in the nature of the soil or in the type of cultivations which were practised in those regions. And at the same time many of these estimates were calculated exclusively, or almost exclusively, for purposes of taxation or cadastre. But this is a particular type of estimation which requires, and can be given, an appropriate method.

Clearly, however, we now have many other reasons for which we are expected to provide estimations. Inasmuch as land, whether it is bare land or whether it is richly equipped with factories, with plantations, with canals, with irrigation, land or *capitale fondiario* as we call it in Italian, is a good: like all other goods, it therefore has a price which is based on market transactions. The method, therefore, has to have reference to the purpose which the estimate is designed to serve. For example, if we have to estimate a selling value, then obviously what we have to determine is the price which that particular piece of land would fetch in the market at that particular time if it were brought forward for sale. This problem is totally different from that which faces the fiscal assessors of various countries, whose problem is to determine the value of an individual piece of land for the purpose of taxation, whether it is an income tax or a property tax. There are many other things which I should like to say on Dr. Boerendonk's paper, but there is no time. I would maintain, however, that in the field of estimation the older Italian students have made important contributions which are not well-enough known, because unfortunately the Italian language is not sufficiently widely known and foreign students find the difficulties of studying Italian texts sometimes insurmountable.

M. J. BOERENDONK

As Professor Medici spoke in Italian and the English translation was not complete, I could not follow everything he said.

I have understood, however (and I have learned from the Italian

publications shown upstairs), that the science of appraisal is much in favour in the Italian Universities. Professor Medici, Professor Proni, and others have made important studies, and the fine book of Professor Medici on 'Estimo' has drawn the attention of many of us so much that French and English colleagues have determined to translate it into their languages.

# LAND VALUATION AND CREDIT IN THE UNITED STATES

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IMPROVEMENT in land valuation and credit lies chiefly in better forecasting of land values and in better classification of soil resources. In this paper the so-called normal value method of forecasting is criticized as being less satisfactory than a more realistic approach called simply appraisal value estimates. For better land classification, more emphasis is proposed for soil productivity grades, aerial maps, and bench-mark farms.

Before discussing specific land value forecasts, the importance of making forecasts as accurate as possible may well be stressed. The welfare of countless farm owners depends on the judgement of lenders as to future land values. Billions of dollars, for example, were borrowed by U.S. farmers in the 1919–29 period, giving their land as security. At the end of this period in 1929, when our first International Conference was being held at Dartington, agricultural economists were giving little thought to the relation of the debt load to the value of land, yet these same values were recognized a few years later as far too high when roughly 1 million U.S. farm owners were dispossessed of their farms through foreclosure and related defaults. During the 1933–5 depression a large portion of the remaining debt was refinanced by the Farm Credit Administration on a lower land value level, but a level which then seemed high in comparison with farm product prices. Prices, however, went up, and the liberal loans of the thirties now seem conservative. But prices may decline in the future. We may be reaching a position similar in some respects to 1929. Hence it is reasonable to ask ourselves if the loans being made to-day are high in relation to the farm income of the years ahead.

Three forecasts of the land market merit attention. First is the present market price paid for land; second is the so-called normal or basic value set by appraisers and farm lenders; and third is a proposed modification of the normal value concept called appraisal value estimate.

The market price for land reflects the estimate of the future made by the land-selling and land-buying public. When the future looks

dark sale prices of farms are low, and when the future appears bright land prices are high. At any given time, such as the present, the sale price of farm land equates effective buyers and sellers, including optimists at one extreme, pessimists at the other, and all shades between.

This view of sale price as a forecast of the future is based on the assumption that buyers in the main are buying in anticipation of a certain pattern of income from the farm in the years ahead. They are willing to part with present funds and borrow on the prospect of receiving sufficient income from the farm in question to pay loan interest and a satisfactory return on funds invested. On the other hand, sellers are motivated by opposite reasons. They are willing to part with their farms because the funds they obtain are preferred to the income from the farm.

Since the land market is not a purely competitive one, a qualification needs to be made at this point. Some sellers are motivated by non-economic reasons such as death in the family, old age, and the like. And some buyers are in the market because farming is the only occupation they wish to follow and they cannot find a suitable farm to rent. Other buyers may be buying solely to raise their social position. In so far as these non-economic reasons affect sale prices, the resulting prices are not an accurate balancing of present funds against future income from land.

Various attempts have been made to forecast the movement of the market price for land. Outstanding among the studies in the United States are those of Clyde R. Chambers, F. L. Thomsen, and Louis H. Bean. Chambers in his bulletin *Relation of Land Income to Land Value* in 1924 proposed the formula $V = \frac{a}{r} + \frac{i}{r^2}$ to explain the behaviour of the land market in the 1900–20 period.[1] In this formula $\frac{a}{r}$ is the familiar annual net return divided by the capitalization rate, while $\frac{i}{r^2}$ is the annual anticipated increase in income divided by the square of the capitalization rate. Although the results did coincide with market values during the 1900–20 period, this formula has not provided a realistic explanation in the years since 1920. The assumption by Chambers of a constant rate of increase (or even of decrease) has not been in accord with the forces operating in the market.

Thomsen and Bean based their studies on the tendency for land

[1] Chambers, Clyde R., *Relation of Land Income to Land Value*, Dept. Bull. 1224, U.S.D.A., Washington, D.C., 1924.

prices to lag behind changes in the prices of farm products. Thomsen in an article in the *Journal of Farm Economics* in 1935 proposed the use of farm product prices and taxes on land to predict the movement of land values. For product prices he used a weight of 10 for the current year, 9 for the preceding, and so on to the tenth year with a weight of 1. This approach provided a close approximation to the land value movements from 1910 through 1930 but did not work well in the years that followed.

Bean in an article in the *Journal of Farm Economics* in 1938 suggested a modification of the Thomsen approach, in which he gave a weight of 52 per cent. to the current year's product prices, 25 to the previous year, and weights of 8, 6, 7, 3, 1 to the preceding years in that order. With this method Bean obtained a remarkably close fit through 1935. Since that time, however, the land market has behaved differently, responding much less to the 1940–8 rise in product prices than in the 1915–20 period. We may conclude, therefore, that there is a relationship between farm product prices and land values, but that this relationship is not fixed; quite the contrary, it is highly variable.

The market price of land as a forecast has not been regarded with favour by farm mortgage lenders in the past twenty years. Their view is that the fluctuations are too wide, that prices of land go too high during periods of prosperity and too low during periods of depression. Their answer is the setting up of a 'normal' value, an average around which they assume land prices will fluctuate.

'Normal' value, our second forecast, was given legal status in 1933 when the U.S. Congress authorized the Farm Credit Administration to make loans based on 'normal' value. At this time land was selling at an abnormally low price compared to the preceding 20 years. The F.C.A. used the 1909–14 level of farm product prices as a base in establishing their normal value. With this normal the F.C.A. made loans as high as the selling price of the land at that time. By 1939 land prices had risen to the normal set in 1933. By 1949 land prices were double those of 1939, and the F.C.A. was faced with a difficult problem of holding to their normal and at the same time getting a share of the loan business.

Two types of normal have been used, the fixed base and the moving average. Use of the 1909–14 level by the F.C.A. is an example of the first type. Difficulty with the fixed base normal develops, as the F.C.A. has found, when the general price level or other factors change, thus throwing the fixed base out of line with the estimates of the future made by well-informed appraisers, lenders, and economists.

Some lenders prefer a moving average of farm product prices as the base for their normal. Their argument rests more on the hope than on the fact that a moving average of a certain number of years will provide an accurate forecast. The moving average, regardless of the number of years included, gives peculiar and unreasonable results at times. For example, those lenders using a fifteen-year moving average of corn prices have been embarrassed to find the average to be used in 1949 is higher than the one for 1948 even though corn prices in 1949 were lower than in 1948. It happened that the 1949 price added was higher than the 1934 price which was dropped at the other end of the moving average. One lender met this situation by shifting to a moving average of a different length, which gave him a figure which appeared more reasonable.

This business of what is reasonable strikes at the heart of our problem. In one instance a lending agency followed a complex mathematical procedure of calculating normal prices of farm products. For most products the calculated price was accepted and used in establishing normal land value. For one product, however, the formula was considered too high; it was rejected, and one which appeared reasonable was arbitrarily substituted.

Is there any objective basis for a normal land price? Unfortunately the answer is no in terms of our present techniques and knowledge. The concept of normal as it is commonly used implies a level to which land prices will return if they deviate in either direction. But we are not able to isolate measurable forces which act in this way. In addition to such swings as we have from prosperity to depression and back to prosperity, there are also a variety of forces which are shaping the general price level and the income which the farm owner receives as a return on his land investment. All that we can fall back on is the tendency for human nature to exaggerate the present, a tendency which is more pronounced at certain times, as in the height of a boom, than at other times.

A more realistic forecast than either market price or normal is an estimate or judgement of the future. This estimate may or may not coincide with the market price. If depressed conditions prevail, the estimate will probably be higher; if prosperity exists, the estimate will no doubt be lower. No claim is made, however, that the estimate is normal or basic. Although such an estimate suffers from being less pretentious than a normal, it does have the virtue of being in line with the ability of appraisers, lenders, and economists to evaluate future price levels.

A land value estimate should be made on the basis of all available

information bearing on the subject. Production trends, technological changes, business cycles, governmental farm policies, population forecasts, and monetary and fiscal policies are examples of data to be analysed and evaluated.

From fifteen to twenty-five years should be the period covered by the forecast. These are the important years usually for the payment of a sizable portion of the mortgage principal, and important years also as one looks into the future. Each year in the future is less important than the one which precedes it, a fact which is conveniently reduced to figures by the discount process. On the basis of 5 per cent., for example, 62 per cent. of the land value in 1949 is represented by the anticipated income of the 20 years, 1949–69.

The relationship between the three forecasts may be illustrated by land values in Iowa since 1933. At the bottom of the depression in 1933 Iowa land was selling for an average of $70 an acre. At that time the F.C.A. normal value for this same land approximated $90 an acre. An appraisal estimate of the future would probably have been about the same amount. In 1939 the market price of Iowa land had risen to $90 an acre, the normal value was still $90, and an appraisal estimate would probably have been $90. In 1949 the market price is $180, the normal value when it is still being based on the fixed 1909–14 base is only $90, and appraisal estimates average around $135 to $145. A poll by the writer of 200 appraisers and loan officials during the last year and a half showed a heavy concentration of estimates of a figure 20 to 25 per cent. below the 1949 market price. These estimates were for the average land value during the future period ending in 1960.

Thus far we have been discussing the time variable. Now let us turn to the geographic variable—the classification of farm land.

More possibility of improvement exists in dealing with geographic differences than in forecasting. However, here, as with time, too much accuracy has been claimed. Appraisers in some instances have gone so far as to value one farm at, say, $58.43 an acre, and another at $56.67 an acre. In the present state of appraisal knowledge this apparent accuracy cannot be supported.

Improvement in geographic classification is likely to come through more precise information on the yielding ability of soils and through the use of aerial maps and bench-mark farms. A major task of the soil scientist is to develop more detailed measurements of the yield variability between soil classes and within any soil class. Some agricultural economists are inclined to assume uniformity within a given soil class. This can lead to serious error. One soil often shades

almost imperceptibly into another. Moreover, it needs to be recognized that no two tracts or units of land, even though small, are exactly the same.

Various rating systems of soil productivity are being used in the United States, but none is receiving widespread acceptance in appraisal. R. E. Storie has designed a system of soil rating based on his experience in evaluating California soils. His system, which bears his name, provides an excellent breakdown of the factors which determine productivity, but the rigid multiplication of the factor percentages has not proved entirely satisfactory in other areas because of the subjective estimating involved in determining the factor percentages. The United States Department of Agriculture ratings are more generalized than the Storie ratings and as such are the best estimates available over wide areas. These, too, however, are subjective determinations which leave much to be desired.

A new approach based on the gathering of objective data is making headway. A. R. Aandall in Iowa and R. T. Odell in Illinois are collecting yield data on different soil types to obtain the necessary foundation for a new system of soil ratings. Yield comparisons of different soils within the same field were initiated in Iowa and comparisons between fields were started first in Illinois.

Sampling procedure deserves special emphasis in this new approach to soil productivity. Samples have to be selected in such a way that the results are representative of the different soils. In addition to the variability of the soil a troublesome factor is the extreme variations in management found within the same soil class. Our experience in tackling these complex questions has been that the working together of the agricultural economist, the soil scientist, and the statistician is highly essential.

Aerial maps and bench-mark farms are proving to be useful tools in more accurate appraising both for assessment and for loans. Aerial maps are excellent for detailed measurement of irregular areas. They serve especially well as base maps on which soil and other data can be added. A comparison of the old method of plotting a farm of irregular field and outside boundaries with the use of an aerial map reveals a large saving of time and greater accuracy with the aerial picture. The use of the aerial map should eventually become standard procedure in the appraisal of farms in many areas.

Bench-mark standard, or key farms, are becoming more common as a means of keeping loan appraisals and tax assessment values in line with each other. Such farms may be particularly useful if continuous yield and income data are recorded on their operations. In

the course of time bench-mark farms can well be the measuring sticks used to evaluate neighbouring farms. In a complete reassessment of 350,000 acres of Story county land in Iowa this year, both aerial maps and bench-mark farms were used to great advantage. It would have been even more successful if reliable data had been available on the operations of the bench-mark farms. These farms, of which there were about fifty representing different sizes and types, were appraised in great detail. An important bit of progress will be made when we begin collecting yield and income data from such farms.

In summary, the future appears bright for progress in land valuation. It will be especially bright if claims of accuracy both in forecasting and in classification are in accord with the facts. Rigorous scientific analysis should be applied along with all available technical knowledge. Yet appraisers, lenders, and economists should never fail to recognize that valuation still contains an important element of human judgement.

K. Skovgaard

Dr. Murray has given us an excellent outline of the American land-appraisal system, following that of Dr. Boerendonk on the Netherlands. I should like to ask Dr. Murray, how the sale prices of farms and land compare with the appraisal values in his country? In Denmark the assessment values of farms are by law subject to the appraised sale values and the goal is to bring the assessment values into line with the appraised sale values. How do the assessment values in Iowa, for example, compare with the sale values and the appraisal values?

W. G. Murray

One of the results which our research has revealed is that tax assessment values and a good many appraised values are too close to the average. Sale values show much more spread. Consequently, low-valued farms are frequently taxed at a much higher value than they would sell for, whereas the unusually good farm is taxed much lower than its sale value. It is one of the jobs of the appraiser to make his geographical classification more accurate, by getting additional spreads. He is not getting that now in many cases. I am speaking, of course, mainly from United States experience.

A. Date

The speaker gave a figure of land values in Iowa in which he said they had risen in 1939–49 from 90 to 190, while appraisal values were

around 140, roughly a difference of about 45 per cent. That figure is interesting because it compares very closely with the discrepancy in Australia between what has been estimated as actual sales transactions and official appraisal values. What factors account for the discrepancy of approximately 45 per cent.?

W. G. MURRAY

The discrepancy is accounted for by our forecast of the future. As I emphasized, it would be dangerous for us to make our appraisals follow exactly current sale prices, because of their wide fluctuations. On this point, however, I would like to add one comment, and that is this: we have noticed a very much more conservative land-market fluctuation in the United States in recent years as contrasted with earlier years. The explanation may be partly that people are taking a longer view. And secondly that they may be listening to some of our extension service reports. We have a feeling that buyers, particularly young men who take on the purchase of a farm which includes a very large capital expenditure, and in doing so sign a mortgage for a considerable portion of the purchase price, do so in the knowledge that the income over the next twenty-five years is going to be very important in the success which they have in paying for and staying on their farms. So this discrepancy is merely an indication that lenders, appraisers, agricultural economists (not all of them, but in the majority) at the present time consider that the present market value of land is somewhat higher than will prevail on the average during the next twenty to twenty-five years.

D. PAARLBERG, *Purdue University*, *Lafayette*, *Indiana*, *U.S.A.*

There are several different purposes of appraisal. There is appraisal which tries to determine the agricultural productivity or the earning value of the farm; there is appraisal for the purpose of determining how much can safely be loaned on the farm; appraisal for the purpose of determining what might be a fair price to ask in case of a sale; and appraisal for the purpose of assessment of tax revenue. What Mr. Murray has essentially described is the agricultural productivity of the farm. I wonder what modifications would be made in his system for the purpose of determining the other values of the farm. Are other techniques used or are there some modifications made of the technique which he has described?

W. G. MURRAY

I am glad Dr. Paarlberg has brought up this point because it gives me an opportunity to say something about the many uses of appraisal

which are very important, but which had to be left out of my paper. We need to make progress on these other lines. The Germans and the Italians have done a great deal along some of these other lines. In fact, we are right now in the process of what we consider reverse Marshall Aid in terms of getting some of the Italian appraisal literature translated into English. I feel very definitely that more study needs to be made of special problems in appraising, particularly the home value which has not been sufficiently analysed. In our country, we note that more and more attention is being paid to the home, the landscaping, and features which we call the amenities of the farm.

John Lewis

In England, which is a very small country, as I expect you all realize, there is a new factor which has occurred, and I have not heard any previous speakers allude to it. In the value of land, one takes, or did take, all its potentialities into account, and in a small country heavily built on there was always the possibility that some part of it, the frontage particularly, would be wanted for building development. It was for that reason I think that a good many landowners continued to let their farms at totally unremunerative rents hoping that at some time in the progress of development a builder's eye would light on it and a new building development would take place.

The British Government has just passed an Act which takes away from the landowner all the development value. It is a very very revolutionary change. It is almost on a par with the project of land nationalization which some people think would be a good thing. It does not go the whole way, but it does take away from the owner any possibility of acquiring extra value by reason of development. For the first time valuers in England have had to turn their attention to what is the value of agricultural land as agricultural land without an element of speculation for development. The use value (what it is worth to-day) is now the only value of land in England. So that as time goes on we shall find out what up to now we have never known, namely, the real use value of land for agricultural purposes. Speaking personally as a farmer I would be sorry to see land nationalized, because every farmer knows that what one really wants on the land is a 'good' landlord. A 'good' landlord is one who will spend all the rent you pay him and a bit more in keeping the place in order. We think that is a very good condition of things, and we should be sorry to see it abolished.

H. E. GARRETT

I have listened to Professor Murray with great interest and have one question I would like to ask him. I understand that in the United States there are quite a large number of methods used in conjunction with one another for determining the valuation of land for loan purposes. I refer to methods incorporating levels of farm prices, relationship with bench-mark farms, use of the soil survey and so on. In New Zealand these and other methods are used officially, but in fact valuers frequently refer to sale price. They compare the farm in question with the sale price of a number of other farms which are similar and believed to be just above or below the farm in question. They add to that some consideration of the changes in general level of prices. But in effect, while making a book reference to these other methods, the real yard-stick of value is, I think, in the mind of the valuer himself, always the sale price, plus some proportion of the sale price depending on changes in general level of prices. I would like to ask Professor Murray if, in the United States, valuers when making a report for loan purposes, do not inevitably seem to regard the sale price of the land as their real yard-stick, while paying token reference to these other methods.

W. G. MURRAY

Mr. Garrett has raised a fundamental point. Appraisers are conscious of sale values. And as far as I am concerned, it makes little difference whether one makes alterations in the value by appraisal or varies the percentage of the amount to be loaned on the appraisal value. The main point is not to saddle the purchaser with an unusually large loan during periods of very high prices. The other comment that I wish to make is that we who are working on appraisal are trying to emphasize, not just one figure, whether it be sale price or loan value. What we are trying to emphasize is the break-down of the appraisal into what we call the earning value of the land and the part which is represented by the so-called amenities or intangible features. For example, one farm which has very few features might be valued at, say, $100 an acre, of which $90 would be called earning value with only $10 of additional intangible features. Another farm has in addition to earning values some very fine amenities, features which are not strictly earnings. This farm might be valued at $100 an acre, but the earning value might be only $50. The amenities would account for the other $50. The point we want to emphasize is that, in terms of interest-paying ability, one farm has

much more than the other. The two major things are: one, keeping farms from being over-valued during high periods and, the other, preventing the over-valuation of farms with attractive non-income features.

W. J. ANDERSON

It has been my observation that for tax assessment purposes this normal loan or normal value concept is considerably more satisfactory for that particular purpose—because of the fact that one is interested mostly in relative values rather than in the absolute value which is the more important for loan value purposes.

W. G. MURRAY

I agree with Dr. Anderson. The main problem in tax assessment is not so much the absolute amount in dollars as it is to get each farm properly classified in relation to the other farms.

G. MEDICI

I should like to express my deep satisfaction for the paper of Professor Murray because I realize that the general idea supported by the German and Italian schools of appraisal is making way. Appraisal is not only a technique, but a branch of economics. If we bear it in mind, the greatest errors of the past will be avoided. It is with this hope that I express my best wishes for a close collaboration among the different schools of appraisal in different parts of the world.

L. H. BEAN

The study which Mr. Murray referred to was made fully ten years ago. I have not paid much attention to it so that I am not even in a position to criticize his reference to the statement that, since the study was published, land values in relation to prices of farm products have behaved somewhat differently. My impression, however, is that the relationship between farm product prices and land values, such as Mr. Thomsen and I developed, probably still holds by and large. What I mean is that the current value of land is to a large extent determined by the current and the recent levels of farm product prices.

These studies illustrate certain problems of forecasting. Historical studies of economic relationships call for a rather close and continuous attention if they are to be used for forecasting purposes. You cannot leave them for ten years and expect them to continue to function in spite of war and other developments. They need to be followed currently; and improvements made. You may need to

restate your formula and rework the assumptions, and in that way you have a current flow of relationships formulated in statistical or mathematical forms. So much then for the use of analyses which are essentially explanations of past relationships and may be of some use in making short-time forecasts.

They are not likely to be very useful for long-time forecasts covering a period of, say, fifteen years, in which land appraisers are interested. The list of considerations that Mr. Murray gave us, including even fiscal policy considerations that must be taken into account in expectations over a fifteen-year period, indicate how difficult the task of long-range forecasting is.

On the use of moving averages may I record that I have never resorted to them for my own studies. I have found that they sometimes mislead and conceal more than they reveal. I will, therefore, conclude by saying that, first, if you have occasion to use or examine studies that were made ten to fifteen years ago, please be aware of the fact that authors of such studies, assuming they have brought those studies up to date, may have found certain revisions to be necessary; and, second, with regard to long-range forecasts of land values, I do not believe that it is possible to project the course of agricultural prices, if that is the key to land values, in sufficiently accurate forms to be practically useful. Forecasts are, to a very large degree, based on judgements and assumptions and in this area perhaps judgements are better than forecasts.

J. J. MacGregor, *School of Forestry, University of Oxford, England*

I hope I do not strike a sombre note by referring to death-duties. In England a different principle is adopted in the appraisal of land values for that purpose. The distinction is made between selling the property *as a whole* and selling it *most favourably*. The 'most favourable' way of selling the property is taken to mean selling it in small parcels. The property is not necessarily divided in fact, but the value is assessed as though it were. I was wondering if there was a similar principle for land valuation in other countries?

W. G. Murray

I do not know of any such work being done in the United States along that line. I do know that in different countries, particularly as regards taxes, land valuation does call for different techniques in appraisal. For example, we have been endeavouring in the United States to assess the amount of effect which our income tax is having on the land-value structure.

# REDUCING COSTS OF AGRICULTURAL PRODUCTION IN A HIGH-COST AREA

W. H. LONG

*University of Leeds, England*

IN talking to you about reducing costs in a high-cost area I must make it plain that there is only one area that I am at all qualified to talk about, namely, Great Britain. The reason I regard Great Britain as a high-cost area is that the controlled prices of most home-grown foods are higher than are paid for imports.

The following comparisons were given in Parliament and were quoted in *The Times* a few weeks ago:

| | *Home* | *Imported c.i.f.* |
|---|---|---|
| Beef, ton | £136·08 | £68·25 to £79·75 |
| Lamb, ton | £216·25 | £103·54 |
| Mutton, ton | £165·33 | £64·49 |
| Bacon, cwt. ex factory | 239*s.* | 218*s.* 10*d.* |
| Shell eggs, box 30 doz. | £6. 6*s.* 8*d.* | £4. 5*s.* 6*d.* |
| Cheese (exc. subsidy) | 101*s.* 6*d.* to 217*s.* | 206*s.* 10*d.* to 303*s.* |
| Wheat, ton | £20. 11*s.* 8*d.* to £23. 5*s.* | £23. 3*s.* |
| ,, harvest 1949 | £23. 5*s.*+acreage payment | |
| ,, harvest 1950 | £28 | |
| Barley | £23. 10*s.* (min. for milling) | £32. 10*s.* 2*d.* |

These prices are not quite up to date. For instance, the new Argentine Agreement brings the imported-beef price to £97 per ton. Nor do the prices necessarily refer to the same qualities of the foods that are compared. But they show the general position.

The disparity in price is large for most classes of meat and livestock products, but not great for grain. However, whereas the world price of corn and grain is tending downwards, the British price is still rising.

The fact that prices for home produce are mostly higher than imported food does not necessarily mean that home costs are higher. It may be that the British farmer is able to make a bigger profit out of what he produces than is usual for overseas farmers. Some interesting information on the profitableness of farming is given in the *Structure of the National Income* which was published about the time the Chancellor of the Exchequer produced his latest Budget. This shows that the income of farmers has risen from £60 million before the war to £248 million in 1947–8, a fourfold increase, whereas the total national income has risen from £4,640 million to £9,635 million or rather more than double.

Farming in 1947–8 gave an income of £664 per head, compared with an average income per employed person of £420 per head.

On the face of it, therefore, it seems that farmers could afford to take a cut in their incomes and still be as well off as the average employed person, particularly when the relative increase since before the war is taken into consideration.

I am not able to say whether an income no more and no less than the average of employed persons is a fair remuneration to a farmer; Marshall's estimate of the ability of farmers was that 'often the farmer has no greater ability and activity of mind than is commonly to be found among the better class of working foremen in manufactures.' But this estimate was made some fifty years ago.

There are, however, two rather important points to take into consideration in the comparison I have just given. One is that farming prosperity before the War was at a low ebb, and it needed a greater proportionate rise in profits to bring it to the level that most industries could offer on the capital and enterprise applied to them. The other is that profits in farming have to pay the farmer for more than the townsman's wage or salary stands for—they have to reward him for risking his capital in what is often a hazardous enterprise, as well as pay him for his time spent managing his farm or working with his hands. Moreover, the present controlled prices have consciously been set high to allow the farmer to take out of them sufficient capital to finance the changes in his methods of farming which wartime conditions have made necessary. It would, in fact, be difficult to sustain a case that farmers' incomes are substantially, if at all, out of line with the average incomes of the working population, and there is little doubt that if prices of individual commodities were reduced by the amount necessary to bring them in line with world prices, many farmers would find that their costs exceeded their returns. Not everyone, however, is dismayed at high costs of production. Judging by the emphasis that has been placed on production without thought of expense, one might be tempted to believe that so long as production was being intensified all was well, and that the costs of the extra production mattered not at all. For some time after the end of the War there was plenty of reason to believe that this was so. All that was produced, whether it was food or manufactured goods, found a ready market at prices that well repaid the costs of production, and a firm sellers' market encouraged manufactures and increased food regardless of costs. It was, in fact, not until the end of 1948 that the first government posters were exhibited warning workers in industry that full employment depended on a

reduction of costs to a level that would permit British goods to compete in a world buyers' market. Even then agricultural costs received scant attention, and very few references to the high cost of home agriculture appeared until the comparison between home and imported food prices which I have already quoted.

Recently, however, a Hampshire farmer, Mr. J. O. Cherrington, warned his hearers in a paper to the Canterbury Farmers' Club, that the margin between home-grown and imported-food prices would have to be narrowed. 'Ask yourselves', said Mr. Cherrington, 'how you would carry on if the price of what you have to sell were reduced by 25 per cent.' And Mr. Thomas Loveday, Chairman of the Joint Advisory Committee for agricultural education, and a former Vice-Chancellor of Bristol University, said a week or two ago, 'It is of increasing importance that not only should we produce as much as possible, but as economically as possible.'

Similarly, Mr. Noel Newsome, in an article in the *Sunday Observer* of July 10, accuses farmers at the present time of sloth because of the ease with which guaranteed prices and subsidies enable them to make an adequate livelihood in spite of low output at high costs.

But what is the necessity for lower costs? In so far as we import our food from the dollar areas there is no doubt that our present policy of growing as much as possible regardless of cost will help to lessen the gap between imports and exports, assuming that we do not increase agricultural production by importing as much more from dollar countries in raw materials as the increased production is worth, and do not deflect from the export market as much in value as our increased home production saves us from importing. But with many countries we have a favourable balance, and only by accepting their exports, largely food (which are mostly offered at lower prices than we pay for home-grown food), can we hope to continue to trade with them. With yet others, such as the Argentine, trading is still based on the traditional exchange of their foodstuffs for our manufactures. A recent White Paper shows the extent to which we rely on the Western Hemisphere, the sterling area, the O.E.E.C. countries, and eastern Europe for our imports of foods and feeding-stuffs.

| | *Total. Year 1948* *£ million f.o.b.* | *2nd Half 1948* *£ million f.o.b.* |
|---|---|---|
| Western Hemisphere | 271 | 130 |
| Sterling Area | 366 | 177 |
| O.E.E.C. Countries | 111 | 57 |
| Eastern Europe | 63 | 26 |
| Total foods and feeding-stuffs | 811 | 390 |

While the shortage of foodstuffs which has been a feature of post-war conditions persists, the British producer has little to fear, for prices must be high enough to cover his costs of production if he is to continue to produce, and what he produces is too valuable to ignore at any cost. It is only when the supply of goods catches up with the demand for them that the high-cost producer has much to fear. But there are already signs that in at least some classes of food we are reaching that point, and no government that relied on urban votes to the extent that the Government of Britain does could then be satisfied with a scale of prices for home-grown foods that was much above the level at which the same foods could be imported.

Looking at the matter from a broader aspect, the whole standard of living of the British people depends to a very considerable extent on the efficiency of British farming. There was a time when farming could be allowed to languish without any appreciable effect on the rest of the population. Britain's industrial greatness was built in the eighteenth and nineteenth centuries on the international trade that developed between her manufactures and the cheap foods that she imported from the countries that were being developed by her exports of manufactures and capital. How far this food was bought at less than cost of production, how far it was the produce of virgin soil whose fertility was never restored until it degenerated into the dust bowl, and how far the losses on production were made possible to bear by the increase in the capital values of land, I need not go into here. The point is that British costs of production in the manufacturing towns were brought down lower than would ever have been possible if the working classes had been fed only by food sold at what had been the marginal costs of production on British farms.

By the twentieth century not only was the rest of the world providing Britain with food in payment for her manufactures, but food was also being received as interest on the British capital that had been sunk in the development of much of the territory that was first brought under cultivation in the nineteenth century. Britain's position as the world's greatest creditor nation was severely shaken as a result of the First World War, but the shocks we suffered then were small compared with those that arose out of the war just ended. Agriculturally, probably the greatest effect of the Second World War is the necessity it has placed on the home farmer to produce more food than ever before at the lowest cost. Although we must still import a substantial proportion of our food if we are to maintain our population and our standard of living, it is unlikely that we shall ever revert to the degree of international division of

labour which in the nineteenth century allowed us to concentrate so much of our energies on trade and manufacture, and neglect our agriculture. In 1948–9 37 per cent. of our total food consumption in calories and 51 per cent. in protein were home produced and if the agricultural programme proceeds as it is intended to do we shall shortly rely on our own agriculture for fully half of our food. To the extent that cheap food reduces costs of production of manufactures, the importance of reducing costs of home agriculture, if our exports are to compete successfully in world markets, is evident.

It is, all the same, probably true that with retail prices of food controlled at levels considerably lower than the Ministry of Food pays the farmers, the difference being paid for in taxation, high prices for food do not in fact affect the costs of production of manufactures directly. But it is equally true that the high cost of taxation, of which the food subsidies represent a considerable share, is one important reason for the indifference which producers show towards a reduction in their costs of production, and indirectly, therefore, the effect of high food costs on our ability to export is considerable.

I have tried to establish my thesis that from the narrower viewpoint of the British farmer and from the wider viewpoint of the nation as a whole, it is essential that our costs of producing home grown food should be cut. How to do it? I think this question can be answered under two main headings—(1) functional or technical, (2) structural improvements.

There is, I suspect, no agricultural economist with any experience of farm management work who has not been impressed by the wide variations in the returns which are achieved on individual farms whose natural conditions would seem to make them very similar to each other. At a recent meeting of the Agricultural Economics Society my colleague, A. G. Jeffrey, showed that the individual profits of a group of arable farms in the same district of Yorkshire varied from 77 per cent. below the average profit to 65 per cent. above it. This is a wide difference and it suggests that the degree of efficiency on the best farms must be very much greater than on the majority. Jeffrey showed that on these farms, which rely for their income mainly on cash root crops, like potatoes, sugar-beet, and carrots, but also grow corn and, in order to maintain soil fertility, fatten livestock, the size of the farm profit depends mainly on some or all of the following factors: the intensity of production, the crop index, the percentage of land under high pay crops, the output per £100 labour, the livestock output per £100 foods fed, and the livestock output per animal unit, even though no one of these factors

seemed to have an over-ruling effect. The point I am trying to make is that there is a very great variation between the costs on individual farms. A price scale that may be just sufficient to provide a fair return to one farmer will turn another into a profiteer and will force a third out of business altogether. Obviously a big reduction in costs of production would be achieved by increasing the technical efficiency of all to the level of the best.

But important as technical efficiency may be, possibly even more can be expected from an improvement in the structural efficiency of farms. I am going to make this term inclusive, and cover with it the size and layout of farms, their permanent equipment, and the conditions of tenure.

Probably the farms of Britain give as good an example as any of almost complete lack of uniformity in size and layout. Since some types of farming are better suited to small-scale farms and others to larger units, complete uniformity of size could not be expected in a country like Britain, where natural conditions make the type of farming that is most suitable in one district much less satisfactory in another. But this is no explanation for the wide variations in size and layout that are so often found within individual parishes. There must be an optimum size, or an optimum range, in the acreage of farms following a certain system. Corn farming, for instance, invariably associates itself in one's mind with a larger acreage than is required for market gardening or dairy farming, but the variations in the size of corn farms are much greater than would be expected to fit into the optimum range. The same lack of planning exists in the shape and size of fields, and in the general layout of farms. We are proud of the degree of mechanization that has come over our farming during the last ten years. The number of tractors has increased from 50,000 to 250,000, and big increases have likewise occurred in the numbers of combine harvesters, pick-up balers, milking machines, &c. But it is well known that the best results from mechanization are usually achieved on units that are larger than the average in size. In fact the increasing mechanization of farming has made an anachronism of the farming pattern which itself has received only one major upset since the days of the medieval manor and open-field system. That upset was, of course, the inclosures which occurred in most parts of the country at least 150 to 200 years ago and in some places even earlier. Many of these inclosures were by Act of Parliament and they involved a redistribution of the land of each parish on such a scale as to make the achievements of present-day rural planners seem of very little

consequence. But the redistribution at the time of the inclosures was made on the basis of an economy that relied on the horse for its motive power, and had to perform by hand many of the operations that have since been taken over by machines. The size of field and the size of gateway that was satisfactory for horse-drawn cultivating implements and for a gang of harvesters with sickles or scythes can be much too small for the tractor-drawn implements and combine harvesters that often replace them nowadays. Yet little has been done to remodel the shapes and sizes of fields or farms to conform to the greater speed at which power machinery works and the greater room it needs to work in. 'God speed the plough', wrote C. S. Orwin, when he showed the effect on farming requirements of the greater speed at which the plough now runs.

Equally important is the problem of permanent equipment in farm buildings and other landlords' capital. In Great Britain relatively little building has been done since the golden age of agriculture in the middle of the last century, and the buildings that were suitable for the pattern of farming at that time must now be used, with what adaptations may have been possible, for a system of farming that may have changed very greatly since then. An examination of the Agricultural Statistics shows the vast change in agricultural production that has occurred since details were first published in the middle sixties and prepares one for the unoccupied stables that one encounters to-day, the bullock feeding yards so often given up to dairy cows or transformed into implement sheds, and the calf boxes nowadays often accommodating a bail milker instead of calves. But although improvisation has taken place to some extent, and sometimes new buildings have been erected, it is too much to claim that the buildings on many farms are adequate for the purposes they are now required for. Nor is this surprising when the prevailing system of land tenure is examined from this point of view. Although the system is less widespread now than it used to be, it is still true that most of the land in Great Britain is farmed by tenants. There was a time when much of the land was part of large estates and when the rent, which seldom represented a large percentage of the capital value of the land and buildings, was nevertheless sufficient to enable the landlord to maintain his property in good repair, to effect normal improvements, and still to live in some degree of opulence. Even before the latest war, however, it had been established that the percentage return on the capital value of farm land was very small, and a recent investigation indicates that the landlord's average net return, out of which he must still pay taxes before he can spend any

of it on himself, has been reduced from 8*s.* 8*d.* pre-war to 5*s.* 3*d.* per acre. (Much of this land, by the way, if sold with vacant possession would make at the present time £80 to £100 per acre, the net rent representing therefore about ¼ per cent. of the capital value of the land.)

A low return on agricultural land is, of course, no new phenomenon. It has always been a feature of land tenure in Britain that the landlord was prepared to take a low return on his capital because of the prestige, social amenities, and political power that ownership of land carried with it. But most of these advantages have long since been dissipated by a succession of Agricultural Holdings Acts, which have immensely strengthened the position of the tenant against his landlord, by the progressive rates of taxation, and the increased cost of maintenance which have reduced the landlord's economic position, and by the extension of the franchise, which gives him no more voting power than is now enjoyed by the humblest of his tenants.

The landlords have lost, therefore, most of the opportunity to do their duty by the land by reason of their reduced circumstances, and most of the incentives to do so even if they had the money. It is difficult to imagine the present system of land tenure persisting without such an increase in rents as will at least enable the landlords to maintain their properties and to bring about those improvements which the changes in farming methods may make desirable.

I have mentioned these weaknesses in the organization of British farming not because they are not well known (if they were less well known there would be more point in hiding them from the rest of the world), but because enumerating them does draw attention to them and it indicates in what ways costs of production might be reduced. It is true, of course, that many of them are weaknesses which are not peculiar to British agriculture. The structural disadvantages under which most European countries labour are much greater than ours, and even the New World, with the advantages that a wider ratio of land to population gives it, can still find enough to teach its farmers to keep an army of extension and research workers fully employed.

There is, I feel, however, one aspect of its organization in which British farming is particularly vulnerable when it attempts to reduce its costs. This is its dependence on paid labour. During the last seventy or eighty years this dependence has been considerably reduced and whereas the proportion of regular workers to farmers was once about 4 to 1, it is now about 2 to 1. Increased wages have made it desirable, and increased mechanization and efficiency in

organization have made it possible, to bring this about without reducing the volume of production from farms. But even now the ratio of workers to farmers in Britain, and particularly in England, is, so far as I know, greater than in any other important agricultural area in the world. In theory, a paid labour force introduces more elasticity into the labour situation than is possible in a family farming organization or a society of peasant proprietors, which are the systems with which British agriculture has chiefly to compete. But in practice the farmer who employs one, two, or three men is probably at a greater disadvantage in times of falling prices than any other farmer; to reduce his labour force at all will probably mean cutting it down by at least 33 per cent. and perhaps by more than 50 per cent., and such a reduction may be more than the farm will bear without drastic reorganization. The peasant farmer, it is true, is unable to reduce his labour cost at all because all his labour is performed by himself and his family; but he can reduce his standard of living and this, though it is never agreeable, is at least usually practicable. The paid worker may, of course, be prepared to accept a lower wage, which would have a similar effect, but British agriculture, although it is an unsheltered industry much less protected from economic forces than are some other industries, yet has to compete in the labour market with industries which enjoy a considerable amount of natural protection. With a labour force highly organized to maintain its living standard I foresee great difficulty in British agriculture cutting its costs as effectively as many of its competitors unless it can do so by increased structural and technical efficiency. Arising from this, and bearing in mind that, until the substantial rises in the wages of agricultural workers relative to other workers, farm wages were very low, so that the farmer could afford to invest more in labour inputs than in other forms of input, it may be argued that the costs of British agriculture to-day are high largely because farming has developed around the structure of cheap labour.

In recent years, however, another factor has frequently prevented production from proceeding as satisfactorily as might be desired. I have already given examples of the considerable variations which occur in the technical efficiency of farms of the same type. I want now to consider the evidence of variations in efficiency of farms of different structure. The Ministry of Agriculture receive from the Provincial Economists annually records from some 2,000 to 3,000 farmers in England and Wales, and they show the income which these farms make in terms of the wages paid when grouped according to acreage. Now this should give a useful basis for comparison

since the larger farms can usually make more use of labour saving machinery than the smaller farms, and they should also be more likely to have larger fields better laid out than is often possible on smaller holdings. Moreover, as labour normally represents between 40 and 50 per cent. of the total farm expenses,[1] to express profits in terms of labour cost is likely to be one of the most significant ways of comparing results. The Ministry of Agriculture's tables present the average farm income and paid wages for each of eight groups of farms ranging from 0–50 acres to more than 1,000 acres. From this they show the income per £100 wages. No allowance is made in the official tables for the value of the farmers' own manual labour, and I feel that the table is not a satisfactory one for my purpose without taking this into consideration. I have, therefore, assumed that their work was worth £250 per year at 1947–8 wage levels, which is probably not very far from the truth. Recalculating the official table to allow for this addition to the wages, and deducting it from income, I get the following results:

| *Size (acres)* | *No. of farms* | *Income per £100 labour* | *Total income per farm* |
|---|---|---|---|
| | | £ | £ |
| 0–50 | 379 | 12 | 309 |
| 50–100 | 539 | 17 | 367 |
| 100–150 | 435 | 15 | 397 |
| 150–300 | 603 | 22 | 596 |
| 300–500 | 231 | 26 | 948 |
| 500–700 | 55 | 33 | 1,492 |
| 700–1,000 | 25 | 21 | 1,489 |
| 1,000+ | 8 | 22 | 2,151 |

On the lower-sized groups there is a good deal to suggest that the labour was less profitably employed than where the farms were larger. An income of £17 for every £100 labour on farms of between 50 and 100 acres is a poor return compared with the £26 on the 300–500-acre group and £33 on the 500–700-acre group. Up to this point the table suggests that labour used on the larger farms is employed to much better purpose than the labour on the smaller farms.

But this tendency is not continued on the largest farms of all. The income from the two largest-sized groups falls to £21 and £22 respectively per £100 labour, which shows no improvement over any of the groups larger than 150 acres.

Statistically it is unfortunate that the number of farms in the two

[1] Recent Yorkshire farm accounting studies show that if the value of unpaid labour is allowed for the total labour cost invariably exceeds 40 per cent. of the total farm costs.

largest sized groups, 25 and 8 respectively, is so much smaller than in the others, but the change of trend is so pronounced that I am quite prepared to believe that a larger sample would not have reversed it. Moreover, similar tables for the years previous to 1947–8 show the same phenomenon.

There is in this table enough evidence to suggest that size of farm is an important factor in farming efficiency up to, say, 700 acres, but beyond this size no further improvements—but rather the reverse—seem to have been achieved in spite of the additional scope that the largest farms give for increased mechanization and labour economies.

It is nevertheless true that the actual profits made on the largest farms were greater than on any of the small and medium-sized groups. They amounted to £1,500 to £2,000 and the fact that the actual profits were as great as this probably explains why the profits per £100 wages were so small; for taxation bears excessively on the larger incomes and prevents the farmer who, by reason of the size of his business, can easily make a profit of £1,500 or £2,000, from wishing to increase his profit still further to the extent that he might otherwise do. In making this point I am not implying that there is anything in the system of taxation that affects farming profits more severely than profits or incomes made in any other industry or profession, but it is generally accepted that the State, by absorbing so much of the national income in direct taxation, is thereby taking away much of the incentive which the individual might otherwise have to produce more.

The question of incentives in farming, however, is not bound up entirely with taxation. Farming costs, like all other costs, can be divided into prime and overhead, and the degree of intensity to which it pays to push production depends very largely on the ratio between the two, coupled with the law of diminishing returns, which applies with particular force to agriculture. Where the ratio of overhead to prime costs is high, the farmer must produce intensively before he is able to make any profit, but having once covered his overheads, his subsequent costs will be small in relation to his output, and it should be some time before the law of diminishing returns causes him to call a halt.

When the ratio of overheads to prime costs is low, it is usually possible to make a profit at a low level of farming intensity, but diminishing returns will quickly reduce the returns from more intensive farming to a point where it will fail to repay the extra costs.

One of the best-known examples of overheads is, of course, rent,

and, in theory at least, rents should have a compensating effect on land, making it immaterial to the farmer whether he farms on highly productive land, well situated for markets at a high rent, or on poorer land, less well situated, at a lower rent, or at no rent at all. In practice, however, rents have but a small effect in offsetting the natural or economic advantages which some land holds over other land, and the farmer on good land can usually meet his overheads, even when they include a fairly stiff rent, much more easily than the farmer on poor land. This is one reason why farming profits vary to the extent they are known to do, and it is a factor that must complicate very considerably the task of those whose job it is to fix prices. A price per unit which may be necessary to make it worth the while of the man on poor land to continue to produce will bring in an excessive profit to the man on better land who can multiply the same price by so many more units. (To some extent the problem has been solved by the payment of subsidies to farmers on poor land, such as the Hill Cattle and Hill Sheep Subsidies, or by acreage payments which are made regardless of yield. These are in effect attempts to restore the balance between good and poor land which, in theory, is looked after by differences in rents, and in practice is nowadays very inadequately allowed for by them.)

The combined effect of relatively low rents and high taxation on the better lands has been to make it very easy for the farmers on them to make a profit sufficient to live on, but very difficult for them to find any economic reasons for pushing production to the margin.

Take for example two farms, *A* and *B*, *A* growing wheat on good land, *B* on poor land. *B*'s unit costs become marginal at the application of, we will say, the 8th dose of input, but *A* could go on to, we will say, the 20th dose before the additional output resulting from the last dose failed to pay for itself. *A* finds, however, that there is little to induce him to produce beyond, say, the 14th unit, and he stops there, producing his last unit at a lower cost than *B* produces his. But the total output of *A* and *B* would obviously have been produced at a lower total cost if more of the 22 units that were actually produced had been grown by *A*, and fewer by *B*. We are in fact having to encourage more intensive production on already high-cost farms because taxation deters the lower-cost producer from wishing to push production as far as it would otherwise have been worth his while to do. Sometimes, in fact, farmers have preferred to farm for the future, following a system which will enhance the future productivity of their farms rather than one that will produce most food for sale at the present time. They cannot be

blamed for doing what they can to ensure that their land will produce big crops at the lowest unit cost when the time comes for prices to fall, but a system of taxation that encourages greater production in times of abundance than in times of scarcity must be admitted to have serious defects.

This weakness is, of course, inherent in a system that takes in taxation a large proportion of the results of enterprise and it is the same kind of weakness as is apparent in *metayage*. It is, as I have already suggested, by no means an agricultural problem only. But if it is true, as I believe it is, that the differences in individual farm profits as a result of varying abilities in the farmers are greater than in most other ways of making a living, then the brake on efficiency which taxation causes is particularly great, and one cannot help wishing that taxation could be levied on the earlier units of production rather than on the latter, so that it might act as a spur to increased efficiency and not as a deterrent. This it is interesting to note was the method which was applied to farmers until the early war years when for the first time farmers were taxed on their profits instead of on their rents. There were very good reasons for the change. There is no doubt, all the same, that the shift from Schedule B to Schedule D whereby farmers were taxed on their actual profits instead of on their rents has acted as a deterrent to more efficient farming instead of as the stimulus it might have been if, for instance, the rent basis had been retained but the number of times by which it was multiplied for assessing taxation liability had been increased to more than the three times which had been actually employed under Schedule B. However, I do not want to discuss the details of a new scheme of taxation; I am only concerned with drawing your attention to the advantages that might follow from making it more difficult for the producer to overcome certain overheads before he could hope for a surplus for himself, and then making it easy to add to that surplus once his fixed charges had been paid, by continuing to intensify production.

The subject of incentives would be incomplete if I did not refer to incentives for workers. Traditionally the farm labourer was the lowest paid of all workers. This probably reflects the unwritten responsibility which continued to be assumed by farmers long after the Poor Law Amendment Act of 1834 abrogated the duty hitherto laid on the parish of finding work for the unemployed. Agriculture has, in fact, been regarded as the dump of industry's unemployed whenever the supply of labour has exceeded the demand for it, and this, as well as the generally low output of labour in agriculture and

its unorganized condition, has in the nature of things reduced the farm workers' bargaining power. With the shortage of labour in recent years, the increase in the output per man which mechanization has made possible, the improved degree of Trade Union organization and the protection of the Agricultural Wages Boards, farm wages have increased by a much greater percentage than the increase in wages generally. But no satisfactory system of incentive payments has been adopted to any extensive degree on farms, and any increased zeal amongst the workers has not matched the increase in wages. It is, in fact, very easy for the unskilled man at the present time to enjoy the minimum agricultural wage, and very difficult for the skilled man to earn as much more as is represented by his greater skill.

Efficiency depends also on production being carried on at the right degree of intensity. Before the war, when there was an abundant supply of all physical inputs, it was easy to strike the optimum intensity, if the optimum was known. But with shortages of feeding-stuffs, manures, and other factors of production, many farms have in recent years found it impossible to build up their output to its optimum size, and their fixed overhead charges per unit of production have therefore been greater than they would have been if more inputs had been available. This shortage has been apparent particularly on farms which used to achieve high outputs of livestock and livestock products by the use of large quantities of imported foods. Supplies of purchased cakes and meals for pig, egg, and even milk production have been distressingly low in recent years owing to the world shortage of these foods, and to the shortage of dollars which many countries are experiencing for spending on them. Many farmers wonder, however, if more Marshall Aid dollars might not with advantage be spent on importing coarse grains instead of on the finished product. The preference which this country is showing for the finished product rather than the raw materials which might be used for producing more food at home is shown in the following table:

*Expenditure of Marshall Aid dollars on food and feeding-stuffs by May 31st, 1949*

| | *W. European countries* $ *millions* | *U.K.* $ *millions* |
|---|---|---|
| Meat . . . . . . . | 111 | 79 |
| Dairy produce . . . . . | 101 | 64 |
| Coarse grains . . . . . | 145 | .. |

Presumably it is considered that our imports of coarse grains from Russia and the Argentine are adequate. It is difficult otherwise to understand why we do not import more from U.S.A.

I feel very conscious that in this paper I have touched on nothing that is not widely known, and nothing I have said, I fear, will of itself do much to reduce costs immediately. Yet I believe that my subject is not out of place at the present time and the very fact that I have to treat it in such a general way is an indication of its breadth. I do not believe that the need for reducing farming costs has ever been taken seriously since prices were first controlled in 1939, though I am quite aware that many of the improvements I have recommended could be undertaken only by investing vast quantities of new capital in farming, much of which might have an alternative use.

I have tried to show, however, that the opportunities for increasing farming efficiency are widespread and that the effect of taking them can be phenomenal. But I am sure that the improvements that it is necessary to bring about will elude us until much more is known about what constitutes efficient farming. At present, although the wide variations that exist in the efficiency of running different holdings has been established, far too little is known of the factors on which efficiency depends. It is easy to point to the weaknesses in farm layout and size, but less easy to speak with authority on the optimum size and layout for any type of farming. Similarly with efficiency factors. Some work has been done on this subject; Sturrock has shown the varying hours of labour spent on cows depending on the size of herd, whether milking was performed by hand or by machine, the type of cowshed, the routine or arrangement of work, and so on. Pettitt has suggested that the efficiency of cows in converting concentrates into milk increases as the yield increases up to 800 gallons per cow, but that thereafter it diminishes. And many publications on financial accounts have established that there is a fairly constant ratio on most types of farms between labour input and the value of the output. But as I have already tried to emphasize, there is need for much more of this sort of thing. Nor do I think that the responsibility for the lack of data should be laid at the door of the economists. As a Provincial Economist myself, I am fully conscious of the small contribution I have made to this subject, yet I can assure you that during the last twenty years I have not been idle, nor do I feel that I have wasted my time. The weakness, I believe, is in the lack of attention that has up to the present been paid to the need for economic investigations. Until 1939 this nation could afford the luxury of an inefficient and depressed agriculture, and there was no

particular reason for subsidizing research into farming systems or costs of production when cheaper food was almost invariably available from abroad. To-day's problem is a different one for we are short of currency to pay for many of the imports that used to be freely available to us, and so far as it is possible to foresee the future, there is little likelihood of the pre-war abundance of cheap food being resumed.

But investigations into the economics of farm management by themselves are of no value unless they are put over to the farmers, and I feel that it is still necessary to build up more sympathy for science amongst practising farmers than has so far been achieved. This is not to suggest that progress in this direction has been slow. Much of the findings of science have been presented to farmers in meetings, in the press and over the radio, at conferences and courses, and have been absorbed into practice; and economic adjustments have often been forced upon farmers by sheer necessity. But few farmers, even of those who have had the opportunity of attending a farm institute, agricultural college, or university school of agriculture, have learnt all that would have been useful to them about farm organization, partly because time was not set aside for it in their curriculum, and partly because adequate information was lacking in any case.

Not everyone, too, will agree that a technical training by itself is necessarily the best way to produce the most efficient farming. Probably Denmark possesses the most enlightened farmers in the world, yet it is admitted that she owes more to Bishop Grundtvig and the Folk High Schools, which are general and not vocational, than to anything else for transforming the 'boorish Danish peasantry of the mid-nineteenth Century into the most progressive farm community of the twentieth Century'.

Let me sum up, then, by suggesting that the necessity for cost reduction in British agriculture is to-day greater than it ever was before, and that the likeliest avenues up which it may be approached are economic research to establish optimum standards, and education of the farming community to put them into practice. Whether putting it like this is a fitting climax to my subject, or merely an anticlimax it is now for you to say.

*In reply to questions,* Mr. Long *continued:*

Professor Norton asks, with reference to the table at the beginning of my paper, if there is not a good deal of difference in quality. In some cases there is. Many of us nowadays, when we look at our

Sunday joint sometimes wonder if the small ration is not dear at the price we pay for it. We are particularly tempted to think so when the meat is frozen beef, as it so often is. But not all our home-produced beef is of first-rate quality either. In pre-war days, compared with the imported Argentine chilled, a lot of our own beef suffered from the fact that it was cow beef and that a lot of other beef came from steers which had been reared from dairy bred dams. Although I believe the quality of most home-killed beef is very superior to the beef we import nowadays, I feel, nevertheless, that the difference in price is significant. If this difference represents the difference in the cost of production it behoves us to consider whether we can still afford to consume such a high-cost article as home-fed beef, or, at any rate, how much of it we can afford.

Dr. Natarajan asks if the Agriculture Act of 1947 has put up the cost of production in any way. I am trying to think of any case in which the Agriculture Act of 1947 has put up the costs. Wages have increased since 1947, but agricultural wages are covered by the Agricultural Wages (Regulation) Act, and not by the Agriculture Act. I cannot think of any case where the Agriculture Act of 1947 has yet put up costs of agricultural production. That is not to say that costs of production have not risen since the Agriculture Act was passed.

The answer to Professor Skovgaard is necessarily problematical. If prices were reduced by 25 per cent. the short-term effect would be a very bad one on production. It would undermine the confidence of farmers, and this would react on the incentives deriving from patriotism which have helped to keep agricultural production high during the war and the post-war period. Whether the long-term effect might work in the other direction I am not sure, but I am prepared to believe that it might on some farms.

My difficulty in answering the question is that, as I have already pointed out, on some farms high costs are due to technical inefficiency or lethargy, and on others to structural weaknesses in the farms. Though a reduction in prices would probably lead to an improvement in technical efficiency where this was lacking, I do not see how those farmers who suffer from handicaps in the structure of their farms would be able to reduce their costs, and lower prices might make it very difficult for such farmers to maintain their production.

J. F. Booth

I was much impressed by the statement made by Professor Long that labour represents 40–50 per cent. of the total cost of production.

Is that an average for Britain as a whole or simply for a particular area? This percentage is higher than I would have expected.

It has frequently been said that in the New World countries we 'farm' land because it is the most abundant and the cheapest factor whereas in the Old World they 'farm' labour for the same reason. The figures given us cast doubt on the accuracy of that statement. Comparing these with similar data for Canada I recall that in a study of some five hundred farms producing milk for consumption in the cities of Ontario just prior to the last war, labour represented from 20–30 per cent. of the total in different districts. In the production of crops like sugar beets and potatoes the proportion of costs represented by labour will be higher, whereas with grain crops it will be lower. There is reason to believe that labour's share of total cost has risen since 1939. The increase in wage rates has probably more than offset the decline in labour content in most branches of Canadian agriculture.

It may be of some significance to know that labour as a cost factor is not as rigidly fixed in Canada as in some other countries. We do not have minimum wage rates, limitations on the hours of labour, and other regulations. Therefore the wages paid tend to be more closely related to the income of farmers and to prices of farm products than might be the case elsewhere. This may be an important factor when the matter of competition in international trade is being considered.

W. H. LONG (*in reply*):

The answer to Dr. Booth's specific question is that I took the figures from a selection of Yorkshire farms—or rather groups of farms in Yorkshire—and used them because in my opinion they represent conditions which occur over quite a wide proportion of the British Isles. I should explain, however, that in our accounting studies we include in our *wages* total the estimated value of the manual labour of the farmer and his wife. If we did not do that, some groups (especially those composed of small farms) would not have such a large proportion of its expenses absorbed by labour. Some of the larger groups, however, have more than 40 per cent. taken by paid wages.

Dr. Booth's suggestion that the higher proportion spent on wages in Britain compared with Canada is due to historical causes is entirely right, and it is only during the present century that labour with us has become sufficiently expensive to make it unwise to be prodigal with it. The mention of the small amount of labour on Canadian farms reminded me of the farm that I took Larry Norton to two years

ago between Doncaster and Leeds. This farm was about 250 acres, almost exactly the same size as Professor Norton's own in Illinois, but, whereas the only regular labour on Norton's farm is that of the operator himself, the man in Yorkshire had twelve regular men and employed also a lot of casual labour. But that does not necessarily mean that Norton's farm is organized more efficiently for labour than the Yorkshire farm. The Yorkshire man is in fact a particularly efficient farmer and has a high output but obviously his labour expenditure is bound to be very much higher than that of Norton's farm in Illinois.

# CONSIDERATIONS ON AGRARIAN REFORM IN ITALY

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I HESITATED to accept the invitation to speak to this Conference on the theme proposed to me by our English friends. I hesitated for two reasons. The first is that the theme is one of those about which I do not feel myself to have reached a complete clearness of ideas. The second is that it relates to a problem which is a highly combustible and exceedingly topical issue in the agricultural policy of my country. My Italian friends will understand me if I hesitate to speak about it in a conference at which the polemics of our national affairs would be out of place.

If these were the reasons for my hesitation, then I ought also to explain how I overcame them. It seemed to me, in fact, that a conference like this of ours does not exist solely for discussion of questions on which the last word can be said, nor of questions which are not vital or controversial. On the contrary, it is because they are vital and controversial and because there are fundamental doubts and uncertainties that we discuss them at all.

Indeed, I feel I shall be performing a useful function even if I limit myself to explaining how and why Italian economists have come to be profoundly divided, not so much about the necessity for land reform, but about the forms which such a reform should take in this country.

First of all let me indicate why all we Italian agricultural economists are convinced that a land reform (as apart from the specific form which that should take) is a plain necessity of our agricultural society. The inquiry into the distribution of landed property carried out by the *Istituto Nazionale di Economia Agraria*, under the direction of its President, Professor Medici, has demonstrated with absolute clarity what everybody already knew, namely, that the distribution of landed property in Italy, as you will have seen in the little book by Professor Medici which has been distributed, is characterized on the one hand by a marked subdivision in the lower ranges of size and income and, on the other hand, by a notable concentration in the higher categories. A further point which the survey brings out, and which is even more important, is that only a small part of the total

property in land, perhaps scarcely a third of the cultivable land, is in the hands of peasant proprietors, while the remaining two-thirds is in the hands of owners who are not cultivators or *borghesi*, as they are commonly called. The survey was unable to demonstrate this statistically, but it nevertheless provided sure evidence when compared with the results of the earlier census of agricultural holdings and of population, and with the accurate and numerous studies carried out in Italy in the last twenty years.

The fundamental characteristic of Italian agriculture, therefore, consists in the fact that over the greater part of the land area and for the greater number of holdings there exists a state of separation or divorce between the ownership of the land and the agricultural business. In this respect our country finds itself in a condition notably different from that of almost all the countries of western Europe, where this dissociation between property holding and farm operation, although it exists, is never dominant, and the dominant tenure is that based on the owner-occupier. This is the case in France where, since the time of the French Revolution, the separation between property and enterprise has been largely eliminated. It is the case in Germany, where a long process of evolution has given the dominant place to the category of peasant owners, the so-called *Bauern*, with their *Höfe* governed by *Anerbenrecht*, and it is also the case in many other countries. One indeed might say all the West with the exception of Spain. I have not made any special studies of the land-ownership régime of other countries, and I cannot give any definite judgement in that respect, but I believe that I should not be wrong in affirming that the position in our country is truly exceptional in this respect.

Since the profound modifications in the system of land ownership in eastern Europe and the agrarian reforms following the First and Second World Wars which resulted in a predominance of owner-occupiers in those countries, our country, with Spain and a few others, is now finding the problem of agrarian reform most insistent, if it is true, as I believe it to be, that agricultural society can only achieve a true equilibrium where and when that association between property-owning and farm enterprise has been established.

That is the reason why all our agricultural economists are convinced that a problem of land reform exists in Italy. On the other hand, there is no agreement among them as to the form which this land reform should take. Needless to say, many extremely large vested interests in our country are opposed to the idea of land reform, and the possibility cannot be excluded that these interests make their influence

and pressure felt in determining the attitude even of certain economists, but the disagreement about which I intend to speak now, profound as it is in Italy, is not so for these reasons. Most agricultural economists who have expressed themselves as being on one side or the other in this question have not done so under the pressure of particular interests, but because of profound convictions based on their own scientific background and on their own knowledge of the facts of Italian agriculture.

Certain of our economists, conscious of this divorce of property and farming enterprise, of the weight of large and very large landed estates, and also, on the other hand, of the profound social disequilibrium that such a property situation implied, and not being content to recognize in theory the necessity for a land reform, have thought it necessary to take up an unequivocal position favourable to a measure of land reform which would apply the concept, embodied in land reform elsewhere, of the 'limit'. That is to say, they would permit the expropriation of a part, at least, of any property exceeding definite limits of annual return or of area, and use the excess land for the formation of owner-occupied holdings.

The land reform project at the moment before the Council of Ministers, even though it has not been fully worked out, is well known to be based on the criterion that property exceeding either 40 or 60 thousand lire of taxable income (according to whether the land is extensively or intensively cultivated), that is to say, properties of areas of over 100 or 300 hectares, respectively, according to the category, should be subjected to progressive cuts, in order to form a fund of about 1·2 million hectares which would be available for the formation of owner-occupied holdings. Although figures of land area have very uncertain significance in our country because of the great variety of soil types and because of the great importance of the poor mountain regions, and although the division between owner-occupied land and land not so occupied has to be estimated because no inquiry has so far given any definite information on this point, nevertheless the scale of the proposed reform can be approximately assessed. Of the 21 to 22 million hectares in private property, it is estimated that at most 7 to 8 million are owner-occupied, while 13 to 14 million hectares are not owner-occupied (the proportions being approximately 35 per cent. owner-occupied, 65 per cent. not owner-occupied). The aim of the proposed reform is to provide owner-occupied holdings covering an area of 1½ million hectares, that is to say, an increase of about a fifth, or 20 per cent. Correspondingly there would be a reduction in property not owner-occupied

of less than a tenth. The $1\frac{1}{2}$ million hectares of new owner-occupied territory would be provided only as to 1·2 million hectares from land expropriated from large private estates, while the remainder, approximately 300,000 hectares, it is proposed, would be provided from land to-day owned by the State or by the communes or other bodies. The proportions, therefore, of the proposed land reform in Italy cannot but appear extremely modest when compared with those of past reforms or of recent reforms in other countries.

Despite the modest proportions of the proposed reforms, many agricultural economists have declared themselves completely opposed, not to reform itself, but to the manner in which it is intended to carry it out, and I should explain at once for your better understanding that I belong to this category. The opposition is not for opportunist reasons; there are scientific and practical reasons for it. They are not so easy to explain as are those of the people who support it. They are not based on simple reasoning, but rather on an objective examination of the specific peculiarities of the structure of land ownership in Italy. This structure, indeed, while it is true that it is characterized by the divorce between property owning and farming enterprise described above, is also characterized by the fact that following this divorce there has grown up a type of agricultural organization and economic and social structure appropriate to it. Agriculture, agricultural society, and the structure of land ownership in Italy have centuries behind them—centuries of slow and complex evolution. As a result of this process of evolution, and at the same time of profoundly different conditions of natural environment, it has become more true of Italian agriculture than of the agriculture of any other country that the situation in one place has come to differ fundamentally from that in another. It is therefore difficult to apply the uniform and simplified policies which elsewhere have been able to function in a progressive, if not altogether a smooth, way. One of our greatest students of agricultural matters—we might, indeed, say one of the fathers of agricultural economics in Italy—Stefano Jacini, said that Italian agriculture is not one agriculture but many, and this judgement of his has, with the passing of the years, become ever more true and more profound. Therefore, to demonstrate the incapacity of a measure of land reform such as that under discussion to deal with the problems which it aims to resolve, it is necessary to examine the facts of these different situations into which Italian agriculture is divided, and upon which this uniform measure must operate.

In view of the short time at my disposal, I cannot go into great detail. Nevertheless, I must give some indication of the general nature of these different characteristics within Italian agriculture if my paper is not to become confused and therefore, in the last analysis, useless. In northern Italy, in the whole of the Po Valley, the evolution of landed property has brought about a structure of medium-sized capitalistic undertakings worked on an intensive scale by workers and covering about 1½ million hectares. It is quite clear that in this case any measure of land reform which takes land away from the existing holdings to form owner-occupied holdings would mean the splitting up and destruction of highly organized and highly productive undertakings. It would provoke problems of such great complexity as to render it of doubtful utility as a solution. Indeed, even the most strenuous supporters of land reform and the spokesmen of the workers' unions exclude it from their proposals.

The other great type of Italian agriculture, which is found in the hills and a part of the plains of the north and in practically the whole of central Italy, comprises the so-called *appoderate* regions, in which, that is to say, production is organized in small or medium-sized family holdings governed mainly by contracts of *métayage* or of tenancy. These regions altogether occupy over 7 million hectares, 5 million hectares of which are not owner-occupied. They are occupied by *métayers* or tenants. In this situation there is certainly room for a development of peasant ownership which, especially in the north, has, in fact, made notable progress in past decades, whenever the peasants have had at their disposal the means to acquire land. Nevertheless it is not certain that the application of a mechanical procedure, such as that envisaged in the draft proposals at the moment under discussion, would be the most suitable to achieve the stated aims. In many instances, in fact, the categories which are most in need of a change of system, the estates most suitable for the formation of peasant properties, are not the large estates, which alone would be touched by the reform, but rather the small or medium *borghesi* properties, whose owners sometimes live in a purely parasitic way and are an excessive burden on a small undertaking, from which it is difficult enough to extract a living for even the cultivator's family. Moreover, very frequently the size of holding which ought to pass into peasant ownership is, on the one hand, not sufficiently big to be conveniently split up, and, on the other hand, too big and too expensive for a peasant to acquire all at once, even with the help of the State. One might well ask: How beneficial would it be in effect to reorganize the 20 or 30 thousand

large farms (which is all that would be touched by the reforms) in those regions, while doing nothing at all about the other 400 or 500 thousand small farms already there, which belong to the medium or small *borghesi* proprietors.

The opponents of the draft scheme (that is if they are not influenced by vested interests) do not deny the desirability of intervention, but think that it would be very much more effective if it took a selective and gradual form rather than a mechanically uniform procedure for the whole country. The supporters of the reform, on the other hand, although not concealing from themselves the gravity of these objections, believe that if a land reform is to be introduced in Italy for the general reasons already given, and particularly (as we shall see) to deal with the highly acute social problems of southern Italy, then there is no practical alternative but to apply the same criteria of reform equally to the agriculture of northern Italy and central Italy as well as to the south. The fact is that if the problem of land reform in Italy is urgent, and we are seeking strenuously to find a solution to it, it is principally the land-ownership situation in southern Italy and in the two great islands which calls for urgency. In northern and central Italy, except for a few areas, the divorce between agricultural property owning and farming enterprise has not prevented substantial agricultural improvement, has permitted considerable investment of capital, and has brought about a state of affairs which, on the whole, is economically intensive and progressive, even though it has also produced conditions of great social contrast. The reform under consideration would not eliminate the latter which, indeed, in the opinion of the opponents of the reform can be dealt with only by modifying the existing contracts of tenure.

In southern Italy, on the other hand, the evolution of landed property has brought about a chronic state of general precariousness of all undertakings; a state of affairs which has made progress (already difficult on technical grounds) very much slower and more uncertain than it has been in the rest of Italy. Everybody to-day knows that the future of our country is bound up with the solution of what we have become used to call 'the southern question'. All, moreover, are now convinced that at the root of any solution of this question, and as a necessary preliminary to the industrialization of this wholly agricultural part of Italy, there must be profound changes in the system of land ownership which has grown up there. There must also be profound changes in the contracts of occupiers, in the farm structure, and in the system of capital investment. Therefore, if nobody to-day dreams of denying the necessity of Italian land

reform, it is principally because of the agricultural situation existing in southern Italy.

Here again I should be doing less than my duty if I failed to indicate briefly the reasons for which, even for southern Italy, the draft proposals at present under discussion leave those who know the situation best profoundly disturbed. The agricultural situation in the south is not uniform; on the contrary, it varies from place to place and from region to region. Broadly speaking, however, there are three main types of situation. On the one hand, we have those regions, in the main on the coast, in which as a result of a secular process and of more favourable natural conditions there have grown up more intensive systems of cultivation such as orchards, vineyards, olive plantations, and market gardens, and in which the same process has brought about a general and extreme splitting up of landed property. These regions cover altogether about 2 million hectares on which over 40 per cent. of the population of southern Italy and Sicily lives. It is true that in these regions there are properties which the draft land reform could deal with and usefully divert to the formation of owner-occupied holdings, but it is beyond doubt that only the *areas* of holdings would be affected by it. The fate of these territories would still be to develop along the lines which, through the centuries, has led to the splitting up of landed property in these regions. In other words, despite all the intentions to the contrary, the redistribution of land by the draft reform would mean ultimately the disintegration or pulverization of properties, which to-day undeniably is the gravest evil of this type of agriculture and is the most serious obstacle to its reorganization and improvement.

Important, however, as are the problems of these intensive regions of the south, they are very much less grave than those of the extensive 'latifundian' regions of the south. These are regions of bare soil on which the only cultivation is for grain, alternated here and there with pasture, and with an occasional rotation of root crops. This type of agricultural situation is not only characterized by the extensive method of cultivation, by the low returns per unit of area, and by general poverty, but also by a profoundly unhealthy agricultural organization and by a profoundly unhealthy system of land ownership. It is true that in certain limited regions (particularly in the plains, where it is possible to promote a greater intensity of cultivation by means of complex land reclamation projects) production is organized, as in northern Italy, in large and medium-sized capitalist holdings worked by wage-paid workers. But in other

regions, and, over the larger part of the interior of the south and of the islands, production is characterized by precarious peasant systems. Every estate, whether it is large or small or medium in size, in fact is divided into extremely small patches which are held each by a single peasant family under various kinds of arrangement, but for the most part in tenancy or by share-cropping agreements. These are the regions where the problem of land reform appears in its most urgent form, because the greater part of the land cultivated by peasants is in the hands of *borghesi*. The properties are sometimes large, but more often medium-sized and small, and the relationship between cultivator and proprietor is always a precarious short-period one—very often unfair, and such as to obstruct any process of change or improvement. In the southern part of continental Italy and in Sicily, these extensively cultivated regions occupy over 7 million hectares, of which a little less than 700,000 hectares belong to the extensive regions of the coast, mainly organized in medium-sized and large holdings cultivated with hired workers, while all the rest constitutes what I have proposed to call the *latifondo contadino* because of the prevalence of the types of relationship I have indicated above.

This feature of the south of Italy is one which Italy must change to-day at all costs if it is not to be swept into the category of uncivilized countries. Yet those who know the nature of the situation best are bound to conclude that the land reform which is to-day projected is in danger of aggravating rather than resolving the pathological condition from which this agriculture suffers. It is precisely in these vast regions of the interior, where it is most easy to demonstrate that patches of land, stripped off here and there in every commune from the larger properties, would be difficult to turn into healthy peasant properties of a family character without harm to the peasants as a whole. The most probable final outcome of an operation of this sort would be not the creation of a rational and progressive system, not the stabilization of the peasant on his land, but a state of disintegration which would mean further degradation of an agriculture already sufficiently retarded and backward. For a land reform to succeed in these regions, where the need for it is most evident, opponents of the government scheme believe that the operation should develop not along arbitrary lines which would result from a uniform application of uniform mechanical rules, but by means of carefully studied plans, methodically carried out. These would aim principally at curing the present dispersion of the peasant economy (which represents the most serious of the reasons for

the inferiority of this part of Italy), and would permit the expropriation of land *wherever necessary* without the obligation to do so everywhere, as the present project intends. The expropriation might indeed be on a much greater scale than that which the present project permits.

Enough ought by now to have been said to demonstrate that the disagreements between Italian agricultural economists in respect of land reform (apart of course from those which could be and are fed by the resistance of vested interests) are not about the desirability of land reform, but about the procedure by which such a reform could be carried out. It is difficult to say how this divergence of opinion (which naturally is already making itself felt among the politicians called upon to make the decisions) will be resolved. In the last analysis this divergence of view can be reduced to this: some maintain that it is possible and appropriate to use a uniform instrument of reform analogous to that used in other countries, particularly in eastern European countries, although with certain adaptations. Others, on the other hand, maintain that in view of the complex character of Italian agriculture, with its profound differences, there is indeed room for land reform, but that it should be brought into effect by means of procedures which themselves are complex and selective—that is to say, measures which would not run a fixed rule over every area, but would be based on a very detailed examination of each particular situation on a programme designed specifically for each, and would of course take great account of the prevalence of large and medium-sized estates; but they would be principally directed towards regions where the social problems were most acute, and towards regions where the future of agricultural systems based on owner-occupied holdings seemed most secure, or where modernization and agricultural improvement could not be expected from the present owners of land.

The supporters of the draft reform have an extremely strong argument in its favour, namely, that in view of the enormous resistance that land reform faces in Italy, it might only be possible to bring it about if the procedure is a uniform and mechanical one. If it had to depend on the working out of complex plans and programmes and of the setting up of organizations which, given the opportunity, would be likely to prove really effective, it would risk the fate of many similar initiations in the past of being bogged down without achieving anything. This argument certainly has considerable force, and if it were really valid it would certainly be preferable to put up with the inconveniences of the mechanical application of a reform to not

doing anything, because the situation, as will have been seen, is such that something must be done. On the other hand, however, I think that the risk of getting bogged down, and therefore of achieving little, is precisely what is implicit in the application of the uniform reform which is projected. In view of the fact that the reform is, according to its provisions, to extend over a period of ten years, and of the fact that it involves heavy expense both for the people who are going to be expropriated and for the process of establishing the new owners, there is every danger of it being abandoned, not only under the pressure of vested interests but also because (*a*) of the defects indicated above and (*b*) of the high cost of the operation. In any case the success of operations of this sort depends on the efficiency of the bodies created to put them into effect and of the men in charge; but if this is so it is difficult to see the usefulness of fettering the action of these organizations and these men with standards which are too rigid and which in too many cases cannot be conveniently applied. It would surely be better to furnish them with the necessary powers to carry out plans worked out by themselves on the principle of demanding most from those who have most and sparing those who, while having the greatest capacity to work, possess least. The sole objection which remains is that of juridical equity, but it is already too obvious that in the world of to-day this has been allowed to present too strong an obstacle to a solution based on technical and economic considerations. It ought to be sacrificed in the general interests of the whole community.

I should like to conclude by formulating certain considerations of a more general character which seem to me to arise out of the discussions at present taking place in Italy and which relate, so to speak, to the theoretical definition of the concept of land reform. The concept of land reform, where this is carried out, as all have been, by the application of a mechanical limit either of income or of area over which one is not allowed to possess land, is an idea which can be beneficially put into effect, even though it might involve temporary inconveniences, in situations where the land ownership system is primitive and where it is possible to make the land accessible only in this way to those forces which are alone able to modernize the farming. In other societies, as for instance is the case in our country, and as certainly is the case in many other countries with an ancient civilization in which the evolution of land ownership is extremely old and complex; where the private ownership of land has existed for a long time; where over long periods of time a series of processes of

adaptation between the system of land ownership and the organization of agricultural production have taken place; where apart from the peasants there exist in agriculture many other categories of owners and of agricultural *entrepreneurs* other than workers; and where the social disequilibriums and the pathological situations have more complex aspects and are aggravated by an excessive density of population; in such situations the concept of land reform is a concept which cannot be applied without modification unless it is to be accompanied by great uncertainty and excessive disturbance. Just as in medicine, complex conditions have to be cured by complex remedies; the primitive method of the lancet and poultice is of no use. The same may be said for the structure of land ownership. The study of this structure, a study which ought to be a specific field of activity for agricultural economists even more now than it has been in the past, ought always to precede any act of reform and ought to guide the carrying out of it, according to plans thoroughly studied in every detail, always provided, of course, that the new and more efficacious cure should be equally vigorous and equally capable of being applied in time; otherwise, just as in medicine, it is better to use the old empirical method. With what I have said, which naturally expresses only my personal opinion, I trust I have performed my task of outlining this difficult issue to you.

O. Schiller

Professor Rossi-Doria has given us a very clear and interesting picture of the theoretical basis of the Italian land reform. I would like to ask him if there is a law already in draft embodying the proposals he has outlined and criticized. On another question, I assume that most of the land coming under land reform is already used by peasants in the form of tenancy or in the form of *métayage*. Is it the intention only to change the *ownership* and leave the *occupancy* of the land as it is, or are there plans for new settlement?

M. Rossi-Doria

These are the ideas which have been discussed by the Minister, but no bill has been presented or even drafted. On the second question, Italy is about the most cultivated land in Europe. We cultivate not only the land that is cultivable but also some land that should not be cultivated. There is therefore hardly a scrap of land which is not occupied either by its owners or by tenants. In the latter case, the tenants and *métayers* should have the first right to become owners of the land they occupy. This is not such a simple matter, because a

holding of 15–20 hectares, for example, is needed to provide a living for a family in *métayage*, but would be too much for a family in ownership. On the other hand, it is very difficult to subdivide these holdings. That is one of the problems to be tackled.

A. C. Richmond

In this reform holdings will be provided for which new tenants will be required. Presumably some existing tenants will not be regarded as satisfactory, and therefore some new men will be introduced. Not only that. I understand that a certain amount of land is being reclaimed. That will be unoccupied land for which new peasants will be required. Those peasants will need capital; first of all, the funds to pay for the property, and secondly, the funds for equipping their holdings and for working capital. How will those funds be provided?

M. Rossi-Doria

Some new settlement and land-reclamation work is contemplated in these current ideas. It will, therefore, be necessary to find money not only to compensate those who are expropriated, but also to invest initial capital, which has been calculated at 300,000 lire per hectare. That is probably enough in most instances, but it would be difficult if the spending of more than that were forbidden in a peculiarly costly example. That is an argument for considering every plan on its merits.

W. Klatt

I should also like to ask a few questions on the actual position. I gather from the booklet which we were given at the beginning of the Conference that about 20 per cent. of the acreage is in the hands of property owners who have more than 250 acres or 100 hectares. I am not clear whether this is based on a farm census, i.e. on a census of farm units, or on a census of property units. I gather it is the former, and we know from other countries that the difference is usually quite sizeable. The land in the hands of landlords is probably considerably larger than the 20 per cent. which comes out of the farm census. Secondly, in this land reform, as Mr. Richmond has already said, there would be new settlers. I am wondering whether in the present proposals it is intended to give the land mainly to the *mezzadria* or to *baccianti* (the seasonal labourers) as well, and what proportion would it be of all the people who want to settle. A

similar question was raised the other day, and on an estimate I reckoned that at the best one could probably find land for between a million and a million and a half people, if the land reclamation targets were finally reached. I wonder whether one could say anything similar to give a rough figure of how many people are expected to be settled if the present land reform plans materialize, and from which source the new tenant would mainly be drawn—whether they would be mainly the *mezzadria* or mainly the *baccianti*.

M. Rossi-Doria

The statistics used by Professor Medici and his statisticians are of the distribution of *ownership* and not of the *size of holdings*. Where there are several holdings in the possession of one owner they are returned as one ownership. On the second question, I have dealt only with the one aspect of agrarian reform, namely, the transfer from one type of ownership to another. The other aspect of agrarian reform has been discussed at length in Italy recently, namely, the conditions of tenants and *mezzadria* and the regulation of their relations with the landlords. Agreement was reached a year ago that the shares in share-cropping contracts would be 43 per cent. to the owner, 53 per cent. to the cultivator, and the remaining 4 per cent. to be devoted to improvement of the holding. On the final point, the proposals at present being ventilated envisage that preference will be given to poor peasants. But, as I have said, that is not easy because of the large numbers to be provided for. The land that will be subdivided after expropriation is already occupied by peasants as share-croppers, and it would be difficult to evict them.

A. Vandeling

It may interest Professor Rossi-Doria that in the Netherlands tenancy is increasing. In 1930 50 per cent. of the land was in use by tenants, in 1940 54 per cent., and in 1948 57 per cent. From an economic point of view such an evolution is not necessarily bad, for tenancy in the Netherlands is the cheapest way of getting and using capital. A landowner in the Netherlands makes no more than 2 per cent. from his capital invested in land, and the farmer who becomes an owner has that much less capital to invest in machinery and other capital equipment. I would like to ask, therefore, if it would not have been less difficult for Italy to create (1) a new group tenancy law, and (2) more small economic farm units by dividing large estates but without altering ownership.

M. Rossi-Doria

The Netherlands experience is of great interest to us, although the conditions there are very different from Italy. A good land system ought to have both occupying ownership and tenancy. Some part of that is contemplated in the policy of which I have been speaking.

H. Laforêt

I would like to make a short comment on the problem of *metayage* of which Professor Rossi-Doria has spoken. In France we, too, have the system of land exploitation by share-cropping; it used to cover about half the farms at the beginning of the nineteenth century. But it has steadily decreased and now represents only 10 per cent. of the types of farming. With that decrease in number and in proportion, the share of the cropper has gone on increasing, giving to labour a better remuneration.

In 1945–6 a law was passed to give a statutory basis for tenancy and share-cropping systems. In the preamble of the Act it is stated that the share-cropping system has not the favour of the legislators and that on the demand of the share-cropper the contract can be changed to a rental basis. But the share-cropper rents not only the land from the landlord but generally also a part (usually a half) of the machines and the livestock; to become a farm renter the share-cropper must pay the landlord back his equipment. It is a problem of capital investment. The banks and the mutual credit co-operatives are unable to furnish to the would-be renters the necessary money. Realizing the impossibility, the law announces that where share-cropping persists 'in no case shall the share of the landlord exceed a third of the total products'. Usually the sharing was fifty-fifty but, very often, not all the products were included in the sharing.

In the wine-producing area of the Beaujolais we have a special type of *métayage* called *vigneronnage*. A farm unit for a share-cropper family is 5 hectares, of which 2 hectares are vineyards, 1 hectare is tillable land, and 2 hectares pasture. The share-cropper family can live on the 3 hectares and keep a cow for their personal needs, but only the wine is shared fifty-fifty, and the products of the 3 hectares not in vineyards belong entirely to the share-cropper. In fact, the sharing was already, before the law, in the proportion of one-third for the landlord and two-thirds for the labour.

In the grazing areas, the sharing is also fifty-fifty on the cattle only, but it must be remembered that generally one-half of the livestock belongs to the landlord, and with the present prices of meat it is a

very important sum of money. The share-cropper receives from the landlord the land and generally a half of the livestock, sometimes more. It is possible, therefore, to suggest that the rent of the land only is less than one-third of the products.

In fact it is difficult to say whether or not the law has brought a drastic change in the practice of sharing. The share-cropping system is a very flexible one and gives a great importance to local custom. The share-croppers in many places have utilized the law to obtain some amelioration of their share, e.g. the inclusion of a pig. The Act has merely followed the general long-time trend towards a better remuneration for labour.

S. FRAUENDORFER

As an old friend of this beautiful country Italy and its agricultural economists I am, of course, very curious to know something more about this much-talked-of land reform. I should have to ask at least a dozen questions, but in consideration of the late hour I limit myself to three. One is concerned with what we in Austria call *Kalte Bodenreform*, 'cold land reform'. By this term we mean a spontaneous movement of the peasants to acquire land from their own resources. I know from experience between the two world wars that in Italy this movement of spontaneous land acquisition was quite strong and substantial. I wonder—and this is my question—whether under the present circumstances this spontaneous acquisition of property on the part of the peasant is still as intensive as it used to be, or whether the present political climate, and perhaps also the inflation, have exercised some influence on this movement.

My second question is much shorter but perhaps a little bit more difficult to answer. The formation of small-scale ownership through the eventual agrarian reform in Italy is likely to increase production of those agricultural products which are specifically adapted for small-scale cultivation, i.e. perishable products, vines, fruits, legumes, vegetables, and so on. These, I think, are already difficult to market at home or to export. The proposed agrarian reform might be dangerous by creating a surplus of agricultural products which are hard to export. Is this a consideration to be kept in mind and which might influence the agrarian reform movement?

And now the last question, which concerns land reclamation and land development in Italy. I think, at least in the south of Italy, agrarian reform or land reform is subordinated to the land reclamation scheme; that is, the providing of water in those zones where humidity is one of the main limiting factors of agricultural production.

I wonder whether the financing of land reclamation, irrigation work, and so on, is likely to be assisted by means provided by the Marshall Plan.

M. Rossi-Doria

I shall take Dr. Frauendorfer's questions one by one. First, the movement has not now the force it had in the earlier post-war period, mainly as a result of the period of inflation. But there is a movement, and the government's proposals for land reform intend that it should be promoted. The owners who are liable to expropriation can have three years in which to dispose of the land to the peasants. The voluntary purchase by peasants is a good way, but I do not think too much can be hoped for in this way. The Italian peasant has not enough money.

Second, Dr. Frauendorfer has pointed to a dangerous situation which might arise. New vineyards established in this way would be in a bad position when a market crisis occurred.

Finally, on his last question, there are lands both in southern and northern Italy that can produce much more if they were reclaimed or irrigated, and it is a new development that these projects can be undertaken by means of the Marshall Plan. I know many such projects in the south of Italy and the work is going on very speedily and earnestly, and I expect a lot from this development. But again it is clear that there are difficulties in proceeding on one general plan for the whole country instead of by particular plans specially adapted to the conditions of each area.

# THE PRESENT STATE OF AGRICULTURAL STATISTICS IN EUROPE

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FROM its inception, F.A.O. has emphasized the need for detailed statistics compiled with a view to comparability, since it held, and still holds the view that success would attend its activities in the fields of food and agriculture only if such activities were based on sound information.

Hence, the First Session of the F.A.O. Conference, held in 1945, stressed the need for establishing a 'strong central statistical unit' and for resuming and broadening the work of the International Institute of Agriculture, since any statistics collected in future would have to embrace nutrition and food consumption, rural welfare, agricultural production, fisheries, forestry and forest products, and also marketing.

Persistent efforts have been made for four years, and valuable results have been obtained both in the centralization and dissemination of statistical information and in the improvement of statistics, which demonstrates that F.A.O. regards its activity in the statistical field as one of its most important functions.

Agricultural economists, too, clearly feel the need in their work for increasingly comprehensive statistical data. The present state of agricultural statistics in Europe is a problem which holds the same interest for F.A.O. as for the agricultural economists.

Perhaps the best way of describing this problem to users of statistics is to deal with the following two points consecutively:

1. The conditions governing the compilation of agricultural statistics in Europe and the value of the documentary material at present available.
2. The measures to be taken, nationally and internationally, to improve agricultural statistics.

In other words, we have to show how this raw material, which is what statistics represent for agricultural economists, is produced and how it can be improved. But, to begin with, we must agree on the meaning of the expression 'agricultural statistics'. We take it to mean

all the figures which enable the state of agriculture to be ascertained and its development to be followed. With a view to narrowing a very wide field we shall therefore exclude everything concerned not only with forests and fisheries but also with food, at the same time stressing that agricultural statistics should be read in conjunction with consumption statistics. The compilation of food balance-sheets showing figures for agricultural production checked against figures for utilization and consumption is not only a valuable mode of economic investigation but also an excellent method of checking the value of agricultural statistics.

In the light of the foregoing, agricultural statistics, for the purposes of our study, may be said to comprise (1) basic data on the agricultural structure (number and size of holdings, land utilization, equipment, labour, &c.), which change little from year to year, and (2) data on areas under cultivation, animal and vegetable production and prices, &c., which, on the contrary, are subject to rapid change. This is the classic distinction made by statistical services between basic information, which is often collected by censuses, and current information, which is information centralized on the basis of estimates and samplings previously made. Nevertheless, it cannot be too strongly emphasized that this distinction is a somewhat arbitrary one since there is a close relationship between the two categories of statistics.

Assuming that this definition is accepted, let us first of all endeavour to determine the conditions governing the compilation and the present value of agricultural statistics in Europe.

It is a truism to say that European agriculture does not constitute a homogeneous whole. Considerable differences exist, for example, between agriculture in the Mediterranean countries and that in the countries of northern Europe. It is therefore natural that the expression 'agricultural statistics in Europe' should not be used without some reservations. Each country has its own agricultural statistics, the characteristics of which reflect its personality. But it is none the less true that agricultural statistics have a number of common denominators, just as there are certain characteristics common to agriculture in all European countries. Nevertheless, hasty generalizations must be avoided both in analysing the conditions governing compilation and in studying the available documentary material.

The conditions governing compilation are determined by a number of factors which we shall briefly consider.

We should like to be able to agree with certain statisticians that the comparative complexity of the agricultural structure has but little

influence on the compilation of statistics, since suitable methods enable all problems to be readily solved. But such optimism is exaggerated, and experience shows that difficulties in the collection of statistical information are closely dependent on the agricultural background.

Generally speaking, the agricultural structure in Europe may be said to be inimical to the compilation of statistics; for there are few large areas with extensive holdings practising a simple system of cultivation. On the contrary, most European countries are made up of small agricultural areas of a few thousand hectares, with numerous small farms, tiny holdings, and a wide variety of crops.

This complex agricultural structure is particularly marked in the Mediterranean zone. One need only travel through the country districts of Italy to realize that the compilation of agricultural statistics for Italy will be a difficult matter. For instance, the 1930 agricultural census shows that Italy has 4·2 million holdings for an area of 26 million hectares, i.e. an average area of 6 hectares per holding, which means that in many parts of the peninsula villages can be found containing several hundreds of very small undertakings. That being the case, a census of agriculture will be a costly and difficult business since a large number of investigators will have to be recruited, trained, and paid.

This difficulty is further complicated by interplanting or mixed-crop farming, that is, the growing of two crops together on the same land, with the result that it is difficult to assess the proportion taken up by each; for example, beans and maize grown as mixed crops, or forage crops planted between the vines. In Italy these types of farming apply to several hundred thousand hectares in very fertile areas. Similar remarks may be made with regard to catch-crops, that is, crops grown in such a way that the same land bears two successive harvests in the same year; for example, the growing of cattle turnips immediately after the harvesting of a cereal.

Supplying trained investigators with precise definitions will enable the difficulties arising from the complexity of farming methods to be reduced, but none the less it will always be difficult to obtain very accurate information as to areas under cultivation and crops.

There is no lack of examples. In Portugal and Greece there are districts where the average area of cultivated strips does not exceed a few hundred square metres. It is obvious that in such districts it is more difficult to estimate crops, even by sampling methods, than in districts where each field covers a few hectares.

Hence, in certain cases there is a kind of environmental resistance

to the compilation of agricultural statistics to which the statistician must pay careful attention.

Whatever may be the agricultural structure, the statistician requires the farmer's support in order to obtain information; of course, the new statistical methods, as we shall see, make it possible to minimize the farmer's participation in the compilation of statistics, but not to eliminate it. When surveys and more particularly censuses are being carried out operations are facilitated in cases where the farmers willingly supply correct information. This help from farmers largely depends on their standard of education and on their attitude to statistics.

It cannot be too strongly emphasized that there are still countries in Europe where illiterates account for over 40 per cent. of the total population, and the percentage is still higher in the case of the agricultural population. Uneducated farmers not only fail to appreciate the value of statistics, they also have difficulty in answering the questions asked them, either because they are not accustomed to counting or because they are not acquainted with the official units of measurement used in the country, and use units the conversion of which often involves errors.

Another consequence of inadequate education among certain communities is the impossibility of recruiting a sufficient number of investigators able to carry out their work efficiently without a long, and hence costly, training.

But the lack of education among farmers is not the only obstacle. It often happens that farmers are able but unwilling to supply proper information, since they are afraid that the statistics might be used against them, either as a means of determining their liability to taxation or of fixing contributions in kind from their farms. The remedy for this difficulty is obviously that the public authorities should assure the farmers, by means of legislative provisions, that their declarations will not be used for fiscal or other purposes. Such a guarantee has not been granted to farmers in many European countries (despite recommendations from F.A.O.) and that situation is undoubtedly a source of statistical error which is very difficult for the statistician to correct.

The economic policy pursued by governments has a direct bearing on agricultural statistics. In cases where the public authorities require farmers to cultivate certain crops, oblige them to deliver their produce under certain conditions, and allot seed, equipment, and fertilizers to them on the basis of a prepared plan, very accurate agricultural statistics supplying information concerning each farm

are required. It is obvious that in countries where a planned economy policy of this kind was practised during the war years and has been continued in the post-war period agricultural statistics have made considerable progress.

We might point in this connexion, however, to a misconception which is fairly widespread in many European countries, namely, that agricultural statistics are used only by the public authorities. In point of fact such information should also be of use to farmers in determining their production policy, selling their produce, or buying products essential for farming; to merchants who buy agricultural produce; to carriers who handle such produce; to bankers who lend money to farmers; and even, more generally, to all who are interested in economic life, of which agriculture is only one section.

Even under a system of free economy the public authorities would undoubtedly be more resolute in taking steps to improve agricultural statistics if they were being urged to do so by representatives of the various economic interests which make use of such information.

There are few countries in Europe in which official agricultural statistics are as widely used as are the publications of the Bureau of Agricultural Economics in the U.S.A. It may be that the statistical services in a number of European countries have not made strenuous enough efforts to have their information made speedily available to users through the press and radio. If they reached a wider public they would certainly have more support from public opinion in their endeavour to obtain the raw material they require for their work.

It is no exaggeration to say that one of the greatest handicaps to the European agricultural statistics services is their lack of resources. There are, of course, a few countries whose agricultural statistics services are perfectly organized and can be cited as models; but there are too many where the statisticians have not been allotted sufficient funds to enable them to perform their functions. In such countries, staff (we mean headquarters staff and local staff responsible for collecting information) is inadequate, premises are not always suitable for the efficient organization of work, equipment (calculating and tabulating machinery, and transport) is of such a nature that the work is slow and the time taken to publish results so long that the information has lost some of its interest by the time it becomes available.

Let us quote one example in illustration of the inadequacy of the resources available to European agricultural statistics services. In the case of the 1950 World Census of Agriculture, to which we shall have occasion to refer at greater length later, eight countries out of twenty-two from which F.A.O. received information had statistical

services which experienced great difficulty in obtaining the necessary credits from the public authorities to carry out the task.

Whatever the funds at the disposal of the statistical services, it is obvious that they will not achieve good results unless they have a qualified staff applying satisfactory methods.

The Statistical Commission of the United Nations recently pointed out that there is a world shortage of statisticians at the present time. Europe is of course better served than other continents, but it nevertheless remains true that some countries do not have all the qualified personnel they need.

It follows that the statistical methods used in many countries have not been modernized. As is well known, these methods may be summarized under three main heads: the estimate method, which consists in having investigators prepare estimates covering comparatively large administrative districts; the census method, under which all the elements of the field surveyed are enumerated; and, finally, the sampling method, under which scientifically accurate information is obtained from only a part of the field surveyed.

The last method, which is the most recent, is less costly, enables the survey to be carried out more rapidly and therefore shortens the time taken to publish results, causes less inconvenience to farmers since only a few of them are interrogated, involves less work (fewer investigators and less tabulating equipment), makes it possible to have better-trained investigators because fewer are needed, and, finally, enables the degree of accuracy of results to be checked. Against these numerous advantages a few drawbacks must be pointed out: the impossibility of having a complete inventory of each element of the field surveyed, the possibility of certain errors in sampling, and, finally, the need for a specially trained staff.

These different methods are, in fact, applied very unevenly in Europe. The estimate method is still used almost exclusively in southern Europe. The census method is the most common in the whole of northern and central Europe, but the estimate method is widely used for evaluating crops. Finally, the sampling method is still in its infancy, in certain cases because of the lack of specialist staff, and in others because complete counts are essential for the application of a planned economy policy.

It should be pointed out that even where statistical services require detailed information on every farm the sampling method may be very useful, either for collecting certain additional information or for checking the accuracy of the results of the count.

The advantages of a combination of the different methods adapted

to the background do not appear to have been realized in all countries. But it is to be noted that in recent years a very large number of countries have initiated experiments in sampling methods as applied to agricultural statistics and that the results of these experiments will bear fruit in the near future.

Differing methods of compiling agricultural statistics in the various European countries obviously give rise to widely divergent results. Just as the average yield of wheat per hectare for the period 1934–8 varied between 9 and 30 quintals according to country, so also the value of the statistical documentation of the various European countries ranged between wide limits. In other words, all countries have not managed to overcome the obstacles hampering the improvement of agricultural statistics, obstacles which vary in nature according to the area in question. That, to a certain extent, explains why the statistics for the countries of southern and eastern Europe, where the greatest difficulty is experienced in compilation, are less satisfactory than those of the rest of Europe.

In the light of this statement, let us try, without passing final judgement, to give some indication of the value of available statistical documentation.

Let us first of all examine the data relating to the agricultural structure since they are of fundamental importance and remain relatively constant.

One of the most important types of information is that on the distribution of national territory among the major categories of land (arable land, pasturage, fruit growing, waste land, forests, and non-agricultural land). Such data offer one of the most useful means of ascertaining the state of agriculture, making it possible to estimate its potentialities and to study the respective importance of its various branches.

On the whole, the information relating to arable land and forests is good. For the other types of land, however, although accurate information is available in a number of countries, the information for other countries leaves much to be desired. The fact that the terms 'waste land' and 'pasturage' are often differently defined in a number of countries, offers a very slender basis for comparison. Undoubtedly, in this field, there is room for clarification.

Nor can a very optimistic view be taken of the value of another equally essential type of information, namely, the number and size of holdings. It is a well known fact that this type of information is of utmost importance to the agricultural economist, because of its bearing on technical, economic, and social matters. Although a few

countries are in a position to supply very accurate annual information on this subject, there are other European countries in which no census based on individual declarations of farmers has yet been made, with the result that the acreage distribution of farms has to be ascertained only by approximate estimates which would undoubtedly undergo profound modification if a thorough enumeration were made. It is further to be noted that, in the absence of a uniform definition of an agricultural holding, it is not always possible to compare satisfactorily even those statistics which are available.

Linked with the data on the number of holdings is the information on form of tenure. This is even less accurate, particularly in the south of Europe, where the fact that many farmers have several holdings under different forms of tenure makes statistics particularly difficult to compile.

When speaking of statistics relating to farming equipment, a distinction must be drawn between tractors and other farm machinery. Generally speaking, the number of tractors is fairly well known, because the tractor pack has been recently renewed and also because many countries have a fuel rationing system involving a periodical census. In the case of other agricultural machinery, information varies greatly according to country and, for Europe as a whole, only very rough estimates are available. However, the equipment of farming co-operatives (co-operative wine presses, co-operative silos, &c.) is more accurately known.

As regards agricultural manpower, data is available in many countries on the total number of agricultural workers and their sex distribution. Such information has not much value, however, since it rarely distinguishes between the agricultural worker proper and the person who devotes part of his time to agricultural activity. For instance, the wife of a large-scale farmer is chiefly engrossed in household duties but is shown in statistics as a full-time agricultural worker. There are very few countries, like Denmark, in which statistical analysis has been developed to the extent of obtaining the facts required for ascertaining not only the total agricultural labour force but also the figures for the different classes of agricultural workers. The possession of such information makes it possible to estimate the number of working hours per year, an indispensable datum for studies of productivity.

We shall dwell only briefly on agricultural population statistics since they are really only a subdivision of population statistics. It must be pointed out, however, that the concept of 'agricultural population' was not clearly defined until quite recently, so that any

attempts at international comparison must be treated with some caution.

As a whole, then, it may be said that, with the exception of the countries of northern and central Europe, the statistics on the agricultural structure are very incomplete. Fortunately, a more favourable judgement may be made on the information relating to agricultural production.

As a result of the improvement in cereal supplies in Europe last year, the incentive for the farmers of certain countries to supply incorrect figures in order to keep down the quantity of their deliveries has largely ceased to exist. It can therefore be hoped that this year it will be possible to assess the production of wheat with a satisfactory degree of accuracy and that the information on other cereal crops will be of a utilizable kind.

As for other food crops, the information relating to potatoes, dried vegetables, and oil-bearing plants is, with some reservations for certain countries, on the whole quite good. In general, the statistics for sugar beet and tobacco are excellent, as a special check is usually kept upon them.

Vine growers possess an accurate knowledge of their output but there is some difficulty in ascertaining the precise area under cultivation in regions where interplanting is practised.

Information on forage crops leaves much to be desired. Probably only a very small number of countries would be in a position to give data of sufficient accuracy for an animal-feeding-stuff balance-sheet to be so drawn up that the figures relating to availabilities were not in contradiction to those for livestock numbers.

Except in a few countries, such as Denmark, the Netherlands, and the United Kingdom, the information for fruit and fresh vegetables is of a mediocre standard. Clearly, such statistics are very difficult to obtain but it would be desirable for many countries to pay more attention to the study of such products since their consumption is bound to grow and international trade in them is continually expanding.

Progress has certainly been made since the last war in statistics on animal production. The number of farm animals is more accurately known. It is, however, to be noted that generally the value of the statistics varies inversely with the size of the beasts. Statistics for large livestock are fairly accurate but those for small animals are less so. As for farmyard stock, it is no exaggeration to say that the figures in the great majority of countries are more or less useless.

Many countries use slaughterhouse statistics for determining meat

production. Such a system is effective only when the great majority of animals pass through controlled slaughterhouses, i.e. when domestic consumption on the farm is not too important a factor. Generally the slaughterhouse figures are supplemented by surveys on the number of animals actually slaughtered on farms, but this method does not always yield very good results.

In the case of dairy products, eggs, and poultry, it must unfortunately be admitted that a large number of countries are able to furnish only very rough approximations.

The compilation of statistics on wholesale trade and retail prices does not fall within the field of agricultural statistics. The study of the prices paid to the farmer, on the other hand, is an important type of statistical information which many countries tend to neglect. Only five or six countries in Europe publish statistics on such prices. Certainly the drawing up of such statistics is a delicate matter, but an effort must be made in that direction since they constitute one of the most useful classes of information for all those studying the agricultural situation.

This hasty and incomplete survey of agricultural statistical information in Europe has nevertheless enabled us to point out a certain number of deficiencies which require to be remedied: information on the agricultural structure, on feed production, on fruit and vegetables, on animal production, and on prices paid to farmers.

Before studying the measures which might be taken to improve such statistics, it should be pointed out that, however inaccurate European agricultural statistics may be, they are nevertheless of some value. In the course of 1948, F.A.O. was able to draw up food balance-sheets for a number of European countries, giving both national production, availabilities, use made of those availabilities, and finally the number of available calories per person per day. That information was published in April 1949 after governments had been invited to submit their observations. No doubt the various tables were not above criticism but they did show that by cross-checking the different groups of data it is possible to produce documentation which not only is useful but also points the way to future improvements.

From the foregoing analysis of the conditions governing the compilation of agricultural statistics in Europe, the obvious conclusion may be drawn that to improve those statistics, the favourable factors must be allowed full play and the harmful ones eliminated.

Such action must be undertaken both at the national and at the international level. International bodies cannot, however, take the

place of governments. The main effort must be made in each individual country. Sociologically speaking, statistics are part and parcel of a civilization and must therefore be in harmony with other social institutions. It would therefore be somewhat dangerous to suggest the application of a uniform plan for the improvement of statistics to all countries. Although general guiding lines can be laid down at the international level, each country must adapt them to its particular conditions after suitable research has been carried out.

Furthermore, it cannot be too strongly emphasized that both on the national and international scale, the improvement of statistics is a long-term process requiring great perseverance. Statistics is a science of series, and its value, consequently, lies not in the results obtained at a given moment, but in those gathered over a long period of time.

As we have said before, many European countries have excellent statistics and methods of work which have stood the test of time. Such countries will continue their efforts in the future in close co-operation with the competent international bodies. We should like therefore only to outline the main measures which appear to be required in those countries whose agricultural statistics at the present moment suffer from certain deficiencies.

There is no need to dwell at length on the measures concerned since they have already been mentioned during our study of the conditions governing the compilation of statistics. It will be enough to enumerate them:

Granting adequate funds to statistical services.

Improving the training of staff, particularly by instruction in statistics.

Creating an atmosphere favourable to statistics by guaranteeing secrecy of declaration.

Ensuring the speedy diffusion of information obtained in order to enhance its usefulness.

Launching a programme for raising the standard of agricultural statistics, the general lines of which would be adapted both to national and to international requirement.

For the implementation of this programme, the setting up of quite small statistical laboratories in which a few technicians, freed from day-to-day administrative duties, are able to undertake systematic research into methods is a measure which cannot be too strongly recommended. In the United States of America, at Ames and Raleigh, such agricultural statistical laboratories have been in

existence for some ten years and have made a remarkable contribution to the perfection of sample survey methods. Of course, all European countries cannot be expected to devote such large sums as the United States of America to this type of research but it is quite conceivable that each country should have a few experimental centres for the perfecting of census and sample survey methods. In Italy and France, for example, such a system has yielded very good results.

Such, then, are the main measures which can be undertaken in countries where agricultural statistics are inadequately developed. In addition, however, it is necessary for all countries contemplating changes in statistical policy to take such decisions in consultation with the competent international bodies.

Before the Second World War, the International Institute of Agriculture achieved good results in this field and, as we have seen, F.A.O., from the time of its foundation, has proclaimed the need for a large and efficient statistical service.

The F.A.O. programme in the field of statistics can be summed up as follows:

The collection and distribution of statistical information drawn up on comparable bases.

Encouraging countries to carry out comprehensive statistical operations using identical methods and definitions.

Giving technical assistance to countries with a view to improving their statistics.

We will deal with these three points one by one.

F.A.O. has taken over the publications of the International Institute of Agriculture in Rome. It publishes a monthly *Bulletin* and a *Yearbook of Food and Agricultural Statistics*, a *Fisheries Bulletin* and a *Yearbook of Fisheries Statistics*, a quarterly *Bulletin of European Timber Statistics* and a *Yearbook of Forest Products Statistics*.

Sustained efforts are being made to obtain information from governments as early as possible so as to enable it to be speedily distributed and used in the various economic publications which, although we cannot enumerate them here, naturally contain many references to statistical data.

By comparing the *Yearbook of Food and Agricultural Statistics* for the two years, 1947 and 1948, it is possible to judge the progress achieved; the coverage of the publication is continually expanding and the material is frequently checked in collaboration with national statistical services to ensure the greatest possible accuracy.

We have already referred to the incompleteness of the data

possessed by a certain number of European countries on their agricultural structure and to the fact that the information at present obtained in the various countries is rarely on a comparable basis. It is obvious that if all European countries agreed to carry out a simultaneous census based on identical principles, a great step would have been made towards the improvement of agricultural statistics.

In 1930 and in 1940, the International Institute of Agriculture organized world censuses which yielded some interesting results. In 1930, thirty-seven countries took part in the operation but, in 1940, the Second World War prevented the majority of countries from executing the plans prepared by the Rome Institute.

F.A.O. has taken up the work interrupted by the War. The proposal to hold a world census was accepted in principle in 1945, and preparatory work begun in 1946. After meetings of experts held both regionally and under the auspices of the F.A.O. Standing Advisory Committee on Statistics a draft census programme was drawn up, communicated to governments for their views and finally published after modification in the light of observations made by governments.

The object of the census can be quite simply stated. In the World Census of Agriculture it is intended that each government will obtain accurate and comparable information on its agriculture, including information on:

(*a*) the number of agricultural holdings and their principal characteristics such as size, form of tenure, utilization of the area, utilization of labour, implements, and mechanical power, &c.;
(*b*) the number and characteristics of the people who secure their livelihood from agriculture;
(*c*) areas under crops and numbers of livestock;
(*d*) the volume of production of all important agricultural products.

In other words, each country is invited to collect a certain body of fundamental data, which will not only allow the agricultural structure of the various countries to be ascertained but also enable a general view to be formed of their agriculture.

The suggested questionnaire comprises a short list of census items recommended to all governments and an expanded list which embodies the items in the short list together with a number of other items of which governments will include as many as they can according to the degree of difficulty involved in the statistical operation. Naturally, F.A.O. has not sought to lay down a uniform method of carrying out the census and merely points out that the operation

'is in principle conceived of as a direct enumeration of individual holdings in each country', adding 'but it is anticipated that other means of obtaining the desired information may be preferable or necessary in some areas or countries'.

It is impossible for us, in this paper, to dwell on all the aspects of the census. We should like, however, to say a few words on the results to be expected and on the progress so far made.

It would be somewhat naïve to assume that the countries carrying out the census will have thereby solved all their statistical problems. The census of agriculture is only a stage, although a very important stage, in the process of improving statistics. In the first place, it will make it possible to obtain more comprehensive information drawn up on a basis ensuring comparability in respect of a larger number of countries. The definitions embodied in the census programme afford a solution to some of those problems we raised in the first part of this paper. Secondly, the results of the census will provide a reliable frame for future sample surveys. Thirdly, the census will serve to bring out the state of European agriculture at a particularly important moment, i.e. at a time when, as will be generally admitted, the agriculture of a large number of countries, although not having completely regained its pre-war level, is none the less in a much more satisfactory position. Finally, and this result is a most important one, the census will enable the majority of European countries with agricultural development plans to establish their schemes on a sound basis.

Denmark, Norway, the Bizone and the French Occupation Zone of Germany have already carried out census operations this year. The majority of other countries have begun preparatory work and propose to carry out the census in 1950.

In general, the technical preparation of the operations is well advanced. Almost all countries will carry out a complete enumeration of holdings, in some cases even including holdings of less than 1 hectare, in the census. Some of them will supplement that operation with sample surveys, either with a view to obtaining more detailed information on particular questions which if included in the general census would overload the individual questionnaires, or else as a means of checking the results. F.A.O. has drawn the particular attention of statistical services to the presentation of the results and has proposed a number of tables in which information will be tabulated in relation to the size of the holding. It is to be hoped that all countries will agree to conform to the proposed plan, as otherwise it will not be possible to sketch the general outline of the structure

of European agriculture. The period of time required for completion of the analysis of the results will vary considerably owing to the fact that a number of countries are short of mechanical calculating and tabulating equipment. It appears that many provisional results will be available at the beginning of 1951, but the complete and final results for all countries cannot be expected before the end of 1951 or even in 1952.

Finally, as we have already pointed out, the statistical services of several countries are experiencing difficulty in obtaining funds for carrying out the operations. The best argument that can be used to persuade the public authorities to make the necessary sacrifices is to point out that the census is a genuine investment which will yield returns in the same way as the erection of an irrigation dam, since it will make possible the adoption of a judicious agricultural policy. If the financial obstacles are overcome, there is every reason to hope that the census of agriculture will be carried out in almost all European countries and will make a real contribution towards the improvement of both documentation and statistics.

F.A.O. is not content simply to draw up programmes of work. It seeks also to furnish technical assistance to countries to enable them to improve their agricultural statistics.

In preparation for the world census of agriculture, several conferences of experts were organized at which a number of technical questions were thrashed out. In the course of the next few years, it is planned to hold meetings of European statisticians to discuss certain problems and to decide on the methods to be applied, for example, in statistics of animal production. In that way it will be possible progressively to remedy the statistical deficiencies already pointed out.

Furthermore, F.A.O. is preparing methodological studies which will supply national services with valuable information to help in the improvement and standardization of methods. A handbook on the preparation of food balance-sheets and food composition tables has been published. A handbook on the presentation of statistics and other works are now being prepared.

Finally, F.A.O. has organized centres of applied statistics at which technicians from the national statistical services can undertake further training, it having been observed that, in many countries, the officials of statistical services had experienced some difficulty in adapting themselves to new methods and that this difficulty was one of the main obstacles to the improvement of statistics. In 1948, F.A.O. organized training centres for statisticians at Mexico City and Bagdad,

and, in view of the encouraging results obtained at those centres, it has been decided to set one up in Paris.

The Centre, which will function from September 26 to December 22, 1949, is set up and financed by F.A.O. in collaboration with the United Nations Statistical Office and U.N.E.S.C.O. The French Government has kindly provided accommodation for the Centre in Paris and has contributed funds for its operation, which have been added to those of the international organizations. The training at the Centre will be both theoretical and practical. The students will study the problems which arise in the operation of a modern statistical service. Particular attention will be given to the preparation of the world census of agriculture and of the population censuses which are to take place around 1950.

The Director of the Centre will be Professor Darmois, Director of the Institute of Statistics, Paris, and member of the United Nations Statistical Commission. The lecturers have been recruited from among the best European specialists and, in particular, from the higher ranks of national statistical services.

A large number of countries have agreed to send students to the Centre and there is every reason to believe that the theoretical and practical training received and also the personal contact made with fellow students will enable the participants, on returning to their own countries, to make a considerable contribution to the promotion of accurate and internationally comparable statistics.

In the long and exacting task of raising the standard of agricultural statistics, the International Association of Agricultural Economists can render most valuable assistance.

In the first place, economic studies inevitably involve a thorough analysis of statistical material and thereby afford an opportunity of pointing out its deficiencies. It is most important that the weak points in statistical documentation should be accurately known so that they can be corrected in order of priority.

Secondly, agricultural economists must let no opportunity pass of emphasizing the need for sound agricultural statistics so that the authorities may be persuaded to give statistical services the means to work satisfactorily.

Thirdly, agricultural statistics must be given their place in national educational programmes and the Association of Agricultural Economists, whose membership includes a large number of lecturers and teachers, must stress this important aspect of the problem of improving agricultural statistics.

Finally, agricultural economists should work as far as possible in

close liaison with those responsible for producing agricultural statistics. Too often on our visits to countries we have found the officials of statistical services isolated in their offices and in insufficient contact with the outside world. It is clear that co-operation between agricultural economists and agricultural statisticians (that is to say, between producers and users of statistics) is eminently desirable in all the countries of Europe. We hardly need add that such co-operation is equally essential at the international level and that the statistical services of F.A.O. will always be pleased to work in close collaboration with your Association.

W. Klatt

Mr. Chombart de Lauwe's excellent survey has enabled us to realize that the F.A.O. in the field of agriculture, recovered the ground lost during the War and has reached at least the stage where the International Institute in Rome left off at the outbreak of war. In addition the F.A.O. has added to the statistical work the estimate of food balances on which I would like to make a brief comment.

The work of the F.A.O. started with the view that food consumption in the world might be doubled in ten years' time, and we now have reached the point where we speak of world surpluses. My question is whether the F.A.O. really feels confident that the food balances are sufficiently accurate by now. I have studied the three sets of food balances brought out in the course of the last three years, and I find discrepancies of 20 to 25 per cent. in some countries, not only in calories but in individual commodities. I would like to have an assurance that the latest set which the F.A.O. has brought out is now considered reasonably foolproof, and so much improved compared with their predecessors that they can be relied on. Another question is this: the F.A.O. has now begun to publish the first set of prices and price relationships and has introduced two very valuable tables in the monthly bulletin, one giving the ratio between agricultural prices and the general price index of all commodities, and the other the ratio between food retail prices and the cost of living. It seems to me that the student of prices would gain considerably if they would try to introduce also, monthly or yearly, the very important comparison between the prices of animal produce and those of vegetable produce. It is possible for a good many countries, and where there are difficulties indexes could be prepared by a central agency just by weighting the various commodities for which individual prices or price indexes are produced. Does the F.A.O. contemplate extending the work of price statistics in such

a way that in future a student of price relations will also have summarized tables of interrelation between vegetable produce and animal produce in various countries?

J. B. Chombart de Lauwe

Two questions have been put to me. The first relates to food balance-sheets, and the second relates to prices. The food balance-sheets which have recently been published by the F.A.O. represent an experiment, and in point of fact they are clearly of very unequal value, according to the country. For certain countries they are an excellent piece of documentation and can be used with confidence. But for other countries they are, as it were, rather conjectural. Little by little these figures will be improved. The main method of improving them has to be sought not so much in the F.A.O. as in the countries themselves. For international organizations quite clearly can only give what they receive. If they receive statistics from the various countries which leave much to be desired, the international publication can only reflect what was originally provided. In any case the F.A.O. has definitely decided to continue the publication of these food balance-sheets.

On the matter of prices I am completely in agreement with the questioner as to the need for publishing more complete information about the prices of agricultural products. I would point out, however, that there are other international organizations which publish price statistics. Most of you will know the *Bulletin of the United Nations Statistical Bureau* and the great quantity of statistical information relating to prices which that publication gives. Even so, there is still a case for the F.A.O. to publish this information as well, since it is more convenient to have all the relevant statistical information about agriculture in the same volume. I particularly appreciate the observations which have been made as to the necessity of publishing information about the relationships between the price of animal products and the price of vegetable products, and we intend to publish such information. We cannot claim that we will do so quickly, because very often the information is slow in coming to us; but at all events the countries for which the documentation is available can count on us to place it at their disposal as rapidly as possible.

J. Hespel, *Institut de L'État à Gembloux, Belgium*

Mr. Chombart de Lauwe has suggested checking statistics of production by relating them to statistics of consumption. I have little confidence in a device of that sort, because, as everyone

knows, whereas production statistics are quite frequently derived from positively ascertained facts, consumption statistics are, in reality, estimated rather than statistically ascertained.

Mr. Chombart de Lauwe complains that many national censuses give approximate results only, and he is right. I had the task in Belgium of directing the last general agricultural census, and I realized on that occasion that one could estimate the statistical error at at least 10 per cent. To Mr. Chombart de Lauwe I would make the following suggestion for those countries sufficiently developed in statistical affairs, and for that part of the problem which is concerned with the determination of cultivated area (which I imagine is the essential element in agricultural censuses). In Belgium we have set up in each village a *fichier cadastral*. That is to say, each piece of land is listed, with the name of its proprietor and the names of the occupiers. This makes it possible for census enumerators to avoid missing any piece of land and also to avoid making errors in respect of their areas. I especially draw the attention of Mr. Chombart de Lauwe to this point. In Belgium we have found it to be an innovation of remarkable interest.

Mr. Chombart de Lauwe has spoken of the difficulties in obtaining accurate information from cultivators, and this is indeed the case. On this point, I feel that the promises made to farmers about the confidential nature of the information they provide are generally inadequate. In my country we have found it to be an effective method to point out to farmers, whenever the occasion offers, the consequences of not being conscientious in their declarations. Thus, for example, when our farmers complain about excessive imports of, say, butter, we explain to them in the agricultural press that this is simply the result of inexact declarations made by them of the numbers of livestock. This method seems to me to be very effective.

The minimum areas included in a census must be known by anyone consulting the resulting statistics. In order to permit satisfactory interpretation it would be a good thing to publish the instructions given to the enumerators at the same time as the figures themselves. It also seems to me to be extremely useful if in certain types of cultivation a distinction was made between those plots which one might call commercial (i.e. whose products are destined to be sold on the market) and those whose products are going to be consumed by the cultivators and their families. This is particularly important for market-garden crops.

On the point of work performed by casual labour we adopt the system which Mr. Chombart de Lauwe has indicated, namely, the estimation of the hours of work. It is then possible to translate these

hours of work into man units which are then added to the numbers of permanent workers.

Mr. Chombart de Lauwe complains of the resistance of certain countries to the form of presentation of statistical tables. In this connexion, the most important factor is the ensuring of comparability between successive censuses. That is the reason why one is obliged, when constructing tables for a world-wide census, to take note not only of the models which have been provided, but also of the forms of tables which have been used in previous international or national censuses.

J. B. Chombart de Lauwe

In reply to the extremely interesting observations of Professor Hespel about consumption statistics or, more exactly, as to the use of consumption statistics in the construction of production statistics, I maintain that one can achieve, more often than not, reputable tables. At the same time I would draw your attention to the sampling inquiries into consumption which have been developed in certain countries and which have provided a documentation more and more detailed on this subject which would make it possible to dispense with the estimates which we have hitherto used. As to cadastral methods, I am entirely in agreement with Professor Hespel that it is a very fine method of facilitating the carrying out of censuses. I would make only one qualification, namely, that it is an extremely costly method. Many countries would hesitate before involving themselves in so much expense. As to the confidential nature of statistical information, we are again entirely in agreement with Professor Hespel, and the F.A.O. has several times insisted that the various countries should provide legislation giving agriculturalists a guarantee that the information will not be used for taxation or other purposes. As to the census regulations and instructions, that is well understood, and the F.A.O. has given recommendations that instructions for censuses ought to be published in the census reports. I understand the anxiety of Professor Hespel about the presentation of results. Statistics is a science of perils. In every individual country one tries to make each census comparable with those which have gone before, but while clearly there is a need for national comparability, there is also a need for international comparability. It remains to be seen whether some sort of priority should be accorded to international comparability, it being understood of course that such priority could not be achieved immediately but by progressive attempts in each country, until eventually the whole range of statistical documentation could be presented on a comparable basis.

# THE PROGRESS OF CO-OPERATION IN INDIAN AGRICULTURE

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AGRICULTURE, in the words of Yates and Warriner, 'has almost always had a raw deal and its workers a lower standard of well-being than their fellows elsewhere in the community'. Whenever the State has remained indifferent to the needs of agriculture, farming has not been so prosperous as other occupations, and the average farm has been always on the margin of profitableness and weak in its bargaining capacity as compared to other industries. It has, therefore, been in need of help, mostly from governments. This is true even in the advanced West, whereas conditions for farming in the eastern countries like India and China, where agriculture is the main industry supporting the large majority of the population, are really deplorable.

The farmer in India is among the most illiterate, his farming practices are primitive, and his economic position perhaps worse than that of the average earner in any other profession or trade. The last five or six decades have, in fact, witnessed a steady deterioration in the condition of our farmers, as the State took neither positive steps to help them nor protected them adequately against exploitation by vested interests. Until comparatively recently all the interest that the Government took in agriculture was to extract from it, under a fiction of state-ownership of land, most of its revenue. Measures such as the setting up of an Agricultural Department for adopting improvements in agriculture, the introduction of the co-operative movement to meet the credit and non-credit needs of the farmer, enactment of laws for relieving his indebtedness, &c., have been taken only within the last thirty-five or forty years. Very recently, however, the problem of feeding the growing population has compelled the Government to take a keener interest in agricultural development; but except for some additional lands brought under the plough there has been no significant improvement in farm production, which is very low. Compare, for example, the yields per acre of the following crops in the season 1939–40: Rice, 7.0 cwt. in India with 20·2 cwt. in U.S.A. and 32·2 cwt. in Japan; wheat, 6·4 cwt. in India with 7·4 cwt. in U.S.A., 8·4 cwt. in Australia, and 10·4 cwt. in Canada; sugar-cane, 12·6 tons in India with 20·0 tons

in U.S.A. and 54·9 tons in Java; cotton, 90·0 lb. in India with 246·0 lb. in U.S.A. and 515·0 lb. in Egypt.

During the last two years, however, the ministries in the Provinces and the National Government at the centre are turning their attention to the eradication of some of the deep-rooted maladies of our agricultural economy, such as improving landlord–tenant relationship, abolition of feudal interests in agriculture, consolidation of holdings, &c. But, partly owing to lack of vision on the part of the planners and partly to administrative and financial difficulties, progress in this direction is not so rapid as one would expect it to be.

Among the various devices actively propagated to-day for increasing agricultural production, co-operation counts for much. The problem is, how far can co-operation, as the peoples' own movement, come to the rescue of agriculture and confer the maximum strength on the weak farmer? To render even government assistance effective some agency or other has been found necessary; in the U.S.A. with, for example, its Farm Credit Administration, and in England, with its special legislation for small holdings, its Agricultural Mortgage Corporation, and now its 1947 Agriculture Act. In the present stage of economic development in India we have to learn in every sphere of our economy from sister nations abroad.

It still seems to be true that in regard to any kind of evolutionary change in the methods of agriculture farmers are averse and conservative all the world over. For example, even though the advantages of mechanized cultivation have come to be generally accepted, the feeling appears to remain that such mechanization should not be accompanied by the formation of too large farms. Some hold the opinion that instead of very large estates medium-sized peasant farms should be established, as they are expected to lead to more intensive production and higher standard of living. There is also a great scope for developing efficiency in many other directions, such as the use of better seed and manure, improvement of the quality of animals, and the introduction of modern methods of feeding and breeding them. Many States usefully allocate funds for these purposes; they subsidize the purchase of improved seeds and fertilizers, the purchase of quality bulls, &c., but in all these factors the human material is an important element and, as stated earlier, the peasant is slow to pick up new innovations and he has, therefore, to be patiently taught to apply modern methods intelligently.

These are some of the problems facing agriculture in every country. But while western countries have been able to solve their problems of agriculture in various ways (without too much State interven-

tion), the same problems in India have attained larger proportions and their solution, whether sought through co-operation or otherwise, will involve more than ordinary State interference and State control. Again, in countries such as America and England holdings are large and the question of subdivision and fragmentation does not arise. If any problem arises in this connexion it is probably that of ensuring a suitably sized holding for the peasant and his family. In India, on the other hand, the problem is one of preventing further fragmentation and increasing the size of the farms. Owing to the prevailing laws of inheritance and the Indian agriculturist's attachment to ancestral property in whatever tiny bit he may get it, holdings have been subjected to a process of continuous subdivision into such small fragments that economic cultivation has become impossible. Consolidation has been effected to some extent through co-operation, but whether voluntary co-operation alone can effect a sufficiently rapid cure, and whether State interference through promulgation of laws and otherwise is not also necessary, is a question discussed by governments and co-operative committees and conferences. Again, even with consolidation, individual farms in India are too small to lend themselves to modern methods of mechanized and improved agriculture. Pooling of lands for joint cultivation is not only advantageous but, under the pressure of larger production, quite necessary.

The Co-operative Planning Committee appointed by the Government of India in 1945 studied in detail various issues connected with agricultural problems, including consolidation and fragmentation of holdings. Various provinces, it noticed, had passed consolidation of holdings acts such as the Central Provinces Consolidation of Holdings Act, 1928, the Punjab Consolidation of Holdings Act, 1936, and the United Provinces Consolidation of Holdings Act, 1939. To take a few examples of the work done by the consolidation of holdings societies, there were in the Punjab in 1946 2,003 societies employed in the work. They had a membership of 257,913, and the total area consolidated by them up to July 21, 1946 was 1,543,342 acres. In the United Provinces there were 291 such societies in 1944–5, and the area consolidated by them during the year amounted to 6,907 acres, which reduced the number of plots from 5,461 to 904. In the Central Provinces and Berar, where consolidation through the Revenue Department is provided for, the holdings of nearly a lakh of permanent holders covering an area of about 1,133,000 acres split up into 2,433,000 plots have been consolidated into 361,000 compact plots. Therefore, in view of this degree of success attained by the

co-operative movement in consolidating holdings, co-operative societies should be encouraged to take up the work. The committee, however, felt that for a permanent solution of the problem of increasing agricultural production some form of large-scale cultivation was necessary. They went into the question of the four types of large-scale farming, namely, collective farming (Russia), State farming (Russia), corporation farming (America), and co-operative farming (Bulgaria, Italy, and Palestine), and concluded that co-operative farming, being the most suitable to India, should be tried.

The Fourteenth Registrars' Conference in India (1944) also considered the question and recommended that the system of co-operative joint farming should be introduced wherever circumstances are favourable. The consensus of opinion in India is in favour of the view that co-operative farming presents less difficulties than any other method of farming as it would increase the size of holdings for purposes of cultivation without depriving cultivators of their right to ownership of land. On the subject of State aid in this connexion, the Co-operative Planning Committee have stated that as it would take some time before the benefits of co-operative farming were realized, the State should organize a few model co-operative joint farming societies, two in each suitable district, to popularize the idea so that the peasants may volunteer to organize their own societies all over the country in due course, as the benefits of large-scale farming gradually percolate through the peasant community. The expenditure on the entire establishment of the co-operative joint farming societies should be met by the State for the first few years. It may be added in this connexion that latterly attempts have been made in India to introduce collective and co-operative farming. For example, there are working at present twenty co-operative and collective farming societies in Bombay and nine in the United Provinces. The future of collective farming depends upon the progress of these ventures.

I have endeavoured to show above how farming in India presents problems radically different from those facing European countries, where the question of uneconomic holdings seems to have been tackled with some success. The question of finance does not appear to have been a major obstacle to them in the development of agriculture, and consequently the importance of the co-operative movement *vis-à-vis* farming has not been so great in those countries as it is in India to-day. Cultivation in India is predominantly a pursuit of uneconomic holders; they are illiterate and poor; they have no wherewithal to improve their cultivation in any manner; and

agriculture, not being 'credit-worthy', efforts made by the Government to help directly by way of relief measures, such as granting of loans, do not seem to have met with much success. In regard to marketing of agricultural produce, also, the State has had to interfere to enforce the policy of controls and procurement. The problem can be successfully solved by co-operation alone, but under conditions existing at present in India Government help is indispensable. Help naturally implies some kind of control, and as the Co-operative Planning Committee has envisaged that the Government will have to spend crores of rupees in the cause of co-operation, the question of government control on the movement cannot be set aside. This takes us now to the crux of the problem under discussion, viz. whether the growing power and intervention of the State in economic affairs calls for a re-emphasis of the co-operative principles of voluntary democracy.

With regard to this question of compulsion in relation to co-operation, which is essentially a democratic movement based on the voluntary principle, our experience in India seems to suggest that in some cases compulsion is necessary. For instance, in the case of consolidation of holdings, if in a village the majority of the inhabitants are willing to join a society for the exchange of lands but a recalcitrant minority, owing to some faction or family rivalries or any other reason, do not, the whole scheme would have to be set aside. Or in the case of a cane-marketing society: suppose in a particular village there are about 100 growers and out of these about 70 are willing to supply their cane through the cane society only; but the remaining 30, if they are comparatively bigger cultivators, may refuse to do so, begin to compete with the society, and ultimately cause its failure. Similarly, one can imagine how an irrigation scheme to be initiated in a village to supply water to all the lands there requires the co-operation of all the agriculturists through whose fields the irrigation canal will pass. If a few farmers refuse to join with the majority in such an endeavour the whole scheme will have to be abandoned, to the detriment of all. These are only a few instances where one can see the necessity for introducing compulsion, especially as the need for it is due to illiteracy and lack of proper understanding. An element of compulsion alone can in such cases carry out desirable reforms and changes.

I ask you to note that this plea for some measure of compulsion is based on our limited experience of co-operation and, therefore, it may be accepted with some reservation. For one thing, it may not be quite accurate to speak of the co-operative movement in India as

purely voluntary. It was State-introduced, and the initiative and the guidance still rest very largely with the Government. As a movement originating from the people themselves and entirely controlled and maintained by them it has never existed in India. But owing to illiteracy and conservatism of the people the initiative has had to come from the Government, and thus the movement lacks that innate strength and vitality which it has in the more advanced countries. Apart from general illiteracy and conservatism, co-operative knowledge and co-operative spirit are very much absent in India and there have been few disinterested public workers commanding local confidence and influence. The movement has been and still continues to be a creation of the Government, whose assistance has been all-embracing. In general terms it may be said that State aid has taken the shape of moral, financial, and legislative aid on the usual lines, i.e. legal status, statutory facilities and reliefs in some directions, e.g. taxes, rationed supplies, paying of expert officials, and other financial aid in various forms; but though State-sponsored and State-guided, there has been a very large amount of autonomy in it and, except under very grave circumstances, there has been very little of direct government interference in the management of the institutions.

What has this voluntary co-operation achieved in the forty-five years of its existence in India? Starting with the passing of the first Co-operative Credit Societies Act in 1904, which provided for only credit co-operatives and later, with its scope widened under the second Act of 1912, providing for the organization of central banks, provincial banks, and non-credit co-operative activities, the movement has, as the table opposite will disclose, proceeded at snail's pace all through compared to the vastness of the size and population of India and their credit and other economic needs.

It may be gathered from the table that though the early start was somewhat promising, with the coming of the depression in 1929 till the outbreak of the Second World War the progress of the movement was anything but encouraging. During the War, however, there was a spurt, as reflected in the increase in the number of societies, membership, and working capital. The number of societies rose from 122,000 in 1938–9 to 172,000 in 1945–6 (the latest year for which authoritative figures are available); membership from 5·37 million to 9·16 million; and working capital from Rs. 1,064·7 million to nearly Rs. 1,640·0 million. But even these sudden and welcome increases leave India but poorly served by the co-operative movement. In 1946 we had only one society for about four villages and 2,150 of population. As regards the actual percentage of people

*Progress of Indian Co-operative Credit Societies*

| Period | No. of societies | Increase over previous decade | No. of members | Increase over previous decade | Working capital | Increase over previous decade |
|---|---|---|---|---|---|---|
| | *thousand* | | *million* | | *Rs. million* | |
| 1906–7 to 1909–10 | 2 | .. | ·16 | .. | 6·8 | .. |
| 1910–11 to 1914–15 | 12 | 10 | ·55 | ·39 | 54·8 | 48·0 |
| 1915–16 to 1919–20 | 28 | 16 | 1·13 | ·58 | 151·8 | 97·0 |
| 1920–1 to 1924–5 | 58 | 30 | 2·15 | 1·02 | 363·6 | 211·8 |
| 1925–6 to 1929–30 | 94 | 36 | 3·69 | 1·54 | 748·9 | 385·3 |
| 1930–1 to 1934–5 | 106 | 12 | 4·32 | ·63 | 946·1 | 197·2 |
| 1935–6 to 1939–40 | 117 | 11 | 5·08 | ·76 | 1,046·8 | 100·7 |
| 1940–1 to 1944–5 | 150 | 33 | 7·22 | 2·14 | 1,243·5 | 196·7 |
| 1938–9 | 122 | .. | 5·37 | .. | 1,064·7 | .. |
| 1939–40 | 137 | .. | 6·08 | .. | 1,071·0 | .. |
| 1940–1 | 143 | .. | 6·40 | .. | 1,093·2 | .. |
| 1941–2 | 145 | .. | 6·74 | .. | 1,124·2 | .. |
| 1942–3 | 146 | .. | 6·91 | .. | 1,211·4 | .. |
| 1943–4 | 156 | .. | 7·69 | .. | 1,322·1 | .. |
| 1944–5 | 160 | .. | 8·36 | .. | 1,466·3 | .. |
| 1945–6 | 172 | .. | 9·16 | .. | 1,640·0 | .. |

that came into the co-operative fold, it was just 10·6. The Rs. 1640·0 million mean only Rs. 179·0 of working capital per member and Rs. 4·4 per head of population. India cannot afford to remain so backward in co-operation; if the pace of the movement is to be quickened, it can be done only with much larger government initiative and government control.

These facts support the view that the development of the movement on voluntary lines is likely to be very slow. To hasten the pace the State is invited to intervene actively, which means that the voluntary principle in co-operation has to undergo considerable modification.

The disappointing results of the co-operative movement are largely due to the activities being mostly confined to credit. In 1940–1 as many as 84 per cent. of the agricultural societies in India were credit societies. Mere provision of credit could serve but a very limited purpose for the agriculturists, a vast majority of whom are small tenants and uneconomic holders and, therefore, 'uncredit-worthy'. This explains not only the slow pace of the movement but also the large number of cases of mismanagement, fraud, and liquidation, particularly in times of crop failures and falling prices. In other words, until efforts are made to remedy the maladjustments in the agrarian structure, there is no conclusive evidence of prospect of

success or failure of the co-operative movement in India. It is therefore pertinent for us to reorientate our policy. To give the movement a full trial we must offer the small farmer help to overcome his handicaps and provide him with opportunities to strengthen his position through self-help and co-operation. This, however, presupposes a detailed study of rural economy and sociology. This is, again, a field which we have entirely ignored. Such studies would help us to devise ways and means for eliminating misuse or waste of the farmer's resources, and also for protecting him against exploitation by the vested interests in the villages. Only when this is done will the small farmers feel sufficiently inspired to come under the banner of co-operation. Uneconomic cultivation by tenants and smallholders being the basic affliction of Indian agriculture, only a comprehensive land reform policy can set right the maladjustments in the agricultural economy. It is therefore desirable for the co-operative departments in our Provinces to have a section, working on the lines of the American Extension Service, attending to the problems of families on the marginal and sub-marginal farms. Moreover, concentrated efforts appear necessary to organize multi-purpose co-operative societies, as they are the best agencies for small farmers to reduce farm costs and to increase farm incomes. Except in U.P. and, to some extent, in Bombay, multi-purpose societies have made little headway in India.

On the basis of the experience gained with regard to voluntary co-operation, some of the Provincial Governments have included a 'compulsion' clause in their Co-operative Societies Acts. For instance, in Bombay, when the question of crop protection came up for consideration in the early twenties of this century, the Government appointed a committee to propose measures to deal with the question. The committee recommended fencing as the best method and, except in the case of very valuable crops, it felt that the fencing must embrace a fairly large area in order to reduce the cost per acre. Where all the cultivators were not willing to co-operate to carry out such work the Committee recommended that legislation should be undertaken to provide that if the majority of the owners were ready to bear their share of cost and of maintenance, and if the Government were satisfied with the utility of the project, the remaining landowners should be compelled to contribute. The Co-operative Societies Act was therefore amended in 1936 to provide for the registration of such societies (crop protection societies) if not less than 66 per cent. of the owners, owning in aggregate not less than 75 per cent. of the land, gave their consent to the scheme. It then became obligatory on the minority to bear a proportion of the cost, and procedure was laid down for the

recovery of this amount. In the amendment to the Bombay Co-operative Societies Act passed in 1948 this clause (cl. 64 G) was extended to the better farming societies also. The scope of this provision was made to include under 'better farming societies', joint farming societies, co-operative farming societies, and crop protection societies.

In Assam, similarly, the new Co-operative Societies Act, the object of which is to develop co-operative or collective farming, restricts the right of members of such societies to transfer possession of land held under the society. A member can transfer his possession or interest in any land held by him only to the society or, with the previous approval of the managing body and in accordance with its by-laws, to a member thereof or to a person who is to be admitted as a member of the society.

A few other examples of compulsion in co-operation in India may also be given. The most notable example of this is to be seen in the working of the cane-growers' co-operatives in Bihar. The Bihar Sugar Factories Control Act, 1937 has been amended to introduce an element of compulsion among these societies. If two-thirds of the growers of a village agree to become members of a society, the remaining growers also are compelled to fall in line. Thus the societies become the sole suppliers of sugar-cane in those places where two-thirds of the growers agree. It is estimated that about 700 cane-growers' societies have benefited by the legislation.

In the Punjab, a co-operative village forest society for the preservation and scientific exploitation of village forests can be organized when 75 per cent. of the right-holders in a village, paying two-thirds of the total land revenue, agree to join it. On July 31, 1944, thirty such societies were functioning in the Kangra District. In the case of co-operative societies for reclamation and improvement of *chos* and waste land, the Government could enforce certain sections of the India Forest Act for closure of the land to grazing, &c., if only 35 per cent. of the total right-holders or owners of two-thirds of the land in the area concerned agreed to closure.

From the foregoing it is evident that there has been a growing tendency to introduce compulsion, at least in societies which undertake common measures such as consolidation of holdings, joint cultivation, land reclamation, &c. Indeed, in recent years, with the realization of the increasing importance of co-operation as the best available agency for carrying out such purposes, the question of compulsion has come to the forefront. There is a growing desire on the part of a section of informed public opinion in India for a greater intervention by the State in the field of co-operation and

agriculture, as they consider this a necessary pre-requisite for any successful planning of increased production or amelioration of the conditions of the rural population in as short a time as possible. Some veteran co-operators, however, feel that the intervention of the State in the sphere of co-operation would be incompatible with its voluntary principles or the autonomy of its organization.

Examining this question of co-operation *vis-à-vis* planning, the Co-operative Planning Committee has observed as follows:

'Co-operators have insisted that co-operation should be based on the voluntary principle. It is further argued that planning in co-operation would mean a departure from this principle inasmuch as some form of compulsion is inherent in planning, and that if co-operation is to find a place in a planned economy the voluntary principle must undergo modifications.'

After examining the resolutions of the Registrars' Conferences, it came to the conclusion that although the voluntary principle governing admission to the membership of a co-operative society should be respected, compulsion may become inevitable in certain kinds of co-operative activities like consolidation of holdings, crop protection, or irrigation, in order to achieve an object essential for economic progress. The committee therefore recommended that in the larger interests of the country, resolutions passed by the members of a co-operative society who form two-thirds of the community affected should be made binding by law on non-members also. It also recommended the amendment of the Co-operative Societies Act so as to provide for setting up a responsible agency for determining whether or not a particular scheme is essential. At the same time the committee expressed the hope that with a new outlook responsible nation-building departments of the Government will be able by means of education, propaganda, persuasion, and demonstration to bring about the organization of co-operative activities along planned lines without resort to compulsion.

I will now refer to the deliberations on this question at the All-India Registrars' Conference held in recent years, as at these Conferences both official and non-official co-operators take part, and their decisions may be taken as showing the trend in co-operative thought all over India. The problem came up for discussion in the 1939 session, and the Conference recommended that 'persons should not be compelled to join a co-operative society; nor should the decision of such society be binding on non-members except in cases involving the provision of some utility service which at least a two-thirds majority of those concerned desire'. At the next Conference of the

Registrars held in 1944 the view was taken that where the execution of a plan required action by all members of an économic group or category, it should be made compulsory for all either to join or otherwise to carry out the plan. At the Fifteenth Registrars' Conference held in 1947, the recommendations of the Co-operative Planning Committee were fully examined and the following resolution was finally accepted on this subject, viz. that planning in co-operation does not mean a departure from the voluntary principle governing the membership of a co-operative society, that the principle should be respected and no one should be compelled to join a society, and that responsible nation-building departments of the Government will be able in many cases, by means of education, propaganda, persuasion, demonstration, and denial of privileges to non-members, to bring about the organization of co-operative activities voluntarily along planned lines. The Conference further recommended that where there is need for the provision of a common essential economic service or where the larger interests of the community require it, a resolution passed by a co-operative society should be made binding by law on non-members, provided that a substantial majority of the economic category or group affected accept it.

It will be interesting to find what the next Registrars' Conference will have to say on the subject. Economic and political conditions have been changing rapidly in recent years consequent on the most destructive war the world has ever known. Several countries have been brought to the verge of economic ruin, and it has become imperative that far from sticking to the principle of individual liberty of action all governments have had to interfere in every sphere of economic activity. Planning and control by the State have become the accepted economic theory of the present day even in countries like England, where the spirit of individualism is deep-seated. There has been a great deal of State interference in all sectors of her economy, particularly during and after the Second World War. In the field of agriculture, this is seen in the passing of the Agriculture Act in 1947, which gives overall control in agriculture to the State, including powers regarding the growing of crops. In India, also, one province is contemplating legislation on similar lines. The welfare of mankind has become more the concern of the State than the welfare of any one individual and, indeed, the world has wandered far from the strict and unalloyed individualism of Locke and Bentham towards collectivism and socialism, which necessarily involve greater and greater State interference and control in every walk of life.

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# INTERNATIONAL CONFERENCE
## OF
# AGRICULTURAL ECONOMISTS

## CONFERENCES

*First*, 1929: Dartington Hall, Totnes, Devon, England.
*Second*, 1930: Cornell University, Ithaca, New York State, U.S.A.
*Third*, 1934: Bad Eilsen, Schaumburg-Lippe, Germany.
*Fourth*, 1936: St. Andrews University, Fife, Scotland.
*Fifth*, 1938: Macdonald College, Ste Anne de Bellevue, P.Q., Canada.
*Sixth*, 1947: Dartington Hall, Totnes, Devon, England.
*Seventh*, 1949: Villa delle Azalee, Stresa, Italy.

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THE International Conference of Agricultural Economists was inaugurated during the summer of 1929, when fifty economists from eleven countries met for two weeks at Dartington Hall, Devon, England, on the invitation of Mr. L. K. Elmhirst. The Second Conference was held in 1930 at Cornell University, U.S.A., and was attended by over 300 members and visitors, 20 countries being represented. At this meeting the formal Constitution was drawn up and approved. The Third Conference, held at Bad Eilsen, Germany, in 1934, was attended by 170 members, 19 countries being represented. The Fourth Conference was held at St. Andrews, Scotland, when 219 members and visitors attended, of whom 127 were from 21 countries outside of the United Kingdom. The Fifth Conference, at Macdonald College, Canada, in 1938, was attended by 510 members from 23 countries. The Sixth Conference, at Dartington Hall in 1947, the first to be held after the War ended, was deliberately limited in size. It was attended by 82 members from 23 countries. The Seventh Conference, at the Villa delle Azalee, Stresa, Italy, attracted 271 members from 25 countries.

The Conference has now a total membership of 313, with 31 National or Area Groups. Its representative character has been steadily growing since the first informal gathering in 1929, until it now embraces the majority of countries where the study of agricultural economics is pursued.

The object of the Conference is that of fostering development of the science of agricultural economics and of furthering the application of the results of economic investigation of agricultural processes and agricultural organization in the improvement of economic and social conditions relating to agriculture and rural life.

Membership shall consist of individuals who pay £1, $5, or their equivalent per year, but a maximum of £2, $10, or their equivalent for the period between Conferences. The current period will be three years, for which, therefore, the subscription will be £2, $10, or their equivalent. Members are entitled to a free copy of the *Proceedings* of the most recent Conference and to copies of the *International Journal of Agrarian Affairs*. The majority of members are professional agricultural economists engaged in research, teaching, or public administration, but the membership is representative as well of a wide range of agricultural and economic interests. Applications may be made to the Secretary, who will put the applicant in touch, if desired, with the appropriate national correspondent.

Meetings are held at intervals of two or three years, at a time and place determined by the Council. No two successive meetings can be held in the same country. The meetings afford a unique opportunity of personal intercourse with fellow workers from all parts of the world.

The *Proceedings*, consisting of papers and discussions at each Conference, are published, and one copy, free of charge, is sent to each member. Extra copies, as well as copies of the *Proceedings* of the First, Second, Third, Fourth, Fifth, and Sixth Conferences, may be purchased by members at reduced rates on application to the Secretary, or to Professor F. F. Hill, Department of Agricultural Economics, Cornell University, Ithaca, N.Y., U.S.A.

# CONSTITUTION

## *NAME AND OBJECT*

The name of the organization shall be The International Conference of Agricultural Economists.

The object of the Conference is that of fostering development of the sciences of agricultural economics and of furthering the application of the results of economic investigation of agricultural processes and agricultural organization in the improvement of economic and social conditions relating to agriculture and rural life.

## *MEETINGS*

Meetings shall be held at a time and place determined by the Council. No two successive meetings shall be held in any one country.

## *MEMBERSHIP*

Membership shall consist of individuals who pay £1, $5, or their equivalent per year, but not exceeding £2, $10, or their equivalent for the period between Conferences (which shall be the period from the end of one Conference to the end of the next).

Libraries, corporations, and similar institutions may become members if a duly accredited representative is appointed by each such institution.

The Conference, on the recommendation of the Council, may elect honorary life members.

## *NATIONAL OR AREA GROUPS*

The members of the Conference in each country (or in a group of countries) may form a National (or Area) Group. Each such Group shall make provision for the election of a Chairman of the Group, and may provide for the appointment of a Secretary of the Group, for each Conference period. The Chairman or Secretary, as may be designated by the Group, shall be the correspondent of the Group.

## *EXECUTIVE OFFICERS*

The Executive Officers shall be a President and a Secretary-Treasurer, both of whom shall be elected by the Council at a formally constituted meeting held during a Conference, and shall hold office for a period ending with the close of the next succeeding Conference. The Executive Committee, in the event of the inability of the President to fulfil his duties, shall elect an acting-President who shall hold office until the first session of the next Conference, at which time the Council shall elect a President of the Conference to hold office for the period of the meeting of that Conference.

## *HONORARY OFFICERS*

The Council may nominate for election not more than four Vice-Presidents to serve from the end of one Conference to the end of the next Conference; these Vice-Presidents to be *ex officio* members of the Executive.

## *COUNCIL*

The Council shall consist of the Executive Officers and Honorary Officers as *ex officio* members together with members of each National or Area Group as hereinafter provided.

(*a*) A National or Area Group having 5 or more members may elect one member of Council; having 10 and not exceeding 25 members, two members of Council; having 25 and not exceeding 60 members, three members of Council; having over 60 members, four members of Council; the maximum number of members of Council for any electing Group shall be four.

(*b*) Members of the Council shall be elected and hold office for a Conference period.

(*c*) Method of election of Members of the Council shall be left to the discretion of each electing Group.

## *EXECUTIVE COMMITTEE*

The Executive Committee shall consist of the two Executive Officers and Honorary Officers and the duly elected Chairmen of all National or Area Groups having five or more members.

The President of the Conference shall be the Chairman of the Executive Committee.

The Secretary of the Conference shall be the Secretary of the Executive Committee.

The acts of the Executive Committee shall be subject to the approval of the Council.

It shall be the duty of the Executive Committee to act for the Council between meetings of the Council.

## *PROVISION FOR TEMPORARY ORGANIZATION OF GROUPS*

Where no Group has been constituted the President may appoint a representative to canvass for members in the country or area and to make arrangements for the proper organization of a Group under the Constitution.

## *AMENDMENT OF CONSTITUTION*

The Constitution may be amended by a majority vote at any Conference provided the amendment has previously received the approval of a majority of the Council.

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(For 1947–9)

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AT THE UNIVERSITY PRESS, OXFORD
BY CHARLES BATEY, PRINTER TO THE UNIVERSITY